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CINCINNATI

MEDICAL NEWS

EDITED BY

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Fellow of American Academy of Medicine, etc.

VOL. XXIII., Old Series.

1890

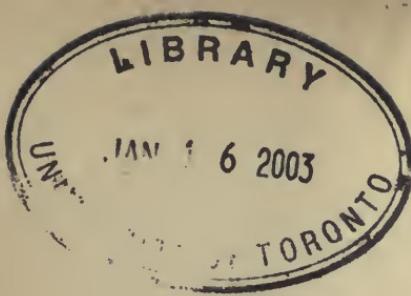
VOL. XIX., New Series.

CINCINNATI:

PUBLISHED BY J. A. THACKER.

Printed by the Elm Street Printing Company, 176 and 178 Elm Street

7435



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THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. NO. 265. } JANUARY, 1890. { VOL. XIX. NO. 1.
Old Series. New Series.

Original Contributions.

Two Papers on Uterine Fibromata.

BY DR. GEL. WYLIE AND DR. PAUL F. MUNDE, OF NEW YORK.

Read in American Gynecological Society in Boston, Sept. 18th, 1889.

DISCUSSION BY DR. THAD. A. REAMY, OF CINCINNATI.

Reported for CINCINNATI MEDICAL NEWS.

IN my opinion, conservatism on this subject is at the present time very important. In certain quarters there is a disposition to resort to the most radical surgical measures, in any case, immediately upon the diagnosis of a uterine fibroid. The above criticism is, so far as I know, more applicable to some sections of our own country than to foreign countries.

In comprehending the proper course in the management of these cases we must take into account, first, the prevalence of the affection; and secondly, the large number of instances in which the tumor, without treatment, ceases to grow, and often a complete, spontaneous cure occurs.

Any one present who has had opportunities for observation on an extended scale in the dead-room will fully appreciate the foregoing remarks. Both intra-mural and sub-peritoneal tumors are found in subjects who presented, during life, no symptoms of the existence of a tumor. These tumors are observed of various sizes, and often show retrograde changes. The observations of Martin, of Berlin, are well known. He found in a series of two hundred and five specimens, removed by himself, fatty degeneration, suppuration, or other evidence of retrograde change, in seventy; about thirty per cent. Probably in every case where fatty degeneration is established a spontaneous cure will result. And practically the same may be said of calcareous degeneration.

I insist that the above considerations must have their full weight in arriving at any just conclusions as to the relations which any given plan of treatment bears to the results obtained. Under the impulse of our present surgical views, after a fibroid tumor of the uterus has been diagnosticated, especially if hemorrhage should be one of the attendant symptoms, the appendages are removed; in the course of time the symptoms subside and the case is at once heralded to the professional world as a speedy cure; and so it may be—but often the proof is not conclusive. In many instances the results are unquestionably spontaneous. And as in the dead-room small fibroid tumors are found in the uteri of childbearing women, the inference is justifiable that in the near future many women who could otherwise have gone on safely fulfilling their duties to society and to the State, will be disqualified by the abdominal surgeon. These remarks are not made in the interests of skepticism as to the value of either the medical or the surgical treatment of fibroid tumors; probably no affection is more amenable to treatment, but if possible we should arrive at the truth. In considering the treatment of these cases it is of the most curious interest to note into what ill repute, in most quarters, the use of ergot has fallen. After the fine results of Hildebrandt were made known, the method was everywhere adopted, and in the hands of many the most satisfactory results were obtained. My own experience, which has been large, furnishes very many instances in which the efficiency of this agent was most marked, or at least seemed to be. More especially have these good effects followed the use of the remedy in cases of the firmer, more truly fibroma as against the myomas, most likely because of the well-recognized fact that fibromas are very poorly supplied with blood-vessels, and that such supply is chiefly peripheral, and, therefore, more easily cut off by uterine contractions. On the contrary, I have seldom witnessed much benefit follow the use of ergot in the treatment of myomatous tumors, whose vascular and nervous supply is more abundant and more central. I have no doubt that the failures experienced by many physicians in the ergot treatment of these cases is largely due to the fact that they make no attempt at discrimination between the varieties of tumor.

I am aware that I risk the criticism of defending a very old and well-known practice—and therefore descending to the “commonplace”—in these remarks as to ergot. This

criticism will not cause me to chafe if I succeed in calling attention to a remedy which, in many cases, is both safe and sufficient, but which has in most quarters without just cause been placed on the shelf, and which has but little recognition in either of the learned papers which have just been presented.

Before discussing this aspect of the subject, I beg, even at the risk of tediousness, or possibly of repetition, to say that modern experiment and observation have conclusively shown that ergot induces contraction in non-striated muscular fibre wherever found in the body, probably more notably in the uterus, because of its abundant supply there. By this action and its increase of blood-pressure it promotes peristalsis, thus relieving constipation, and modifying mal-nutrition in many of these subjects. Its recognized therapeutic action, both special and general, is just what is wanted, and just what would, from a scientific point of view, justify the expectation of the satisfactory clinical results which have followed its use. Is it not strange, therefore, that its use in these cases should have been to such great extent discontinued?

As I do no general practice now, confining myself to gynecological work, no selfish motive can be attributed to the statement, which I make in sincerity, viz.: The fashion of the day in sending every woman who is found to be the subject of a fibroid tumor to a specialist, is not in the interests of justice, and in many instances is not in the best interests of the patient; many cases will recover without treatment, and many others can be cured by the family physician quite as well as by the gynecologist; and in some instances they will be better qualified, after cure by the former, for the discharge of their physiological functions, than when treated by the latter.

I shall not discuss the points in Dr. Wylie's paper in their order—indeed, time admonishes me that I can say but little more. I can not consent to all he says as to Apostoli. We scarcely do justice to Apostoli and his work. For a time, in a general way, his veracity was questioned, but I think no one who has seen him work and who has carefully studied his statements can be justified in questioning his veracity. He is an enthusiast; as such, his judgment is probably sometimes somewhat weakened. But I can see no reason why we should question the results reported from his treatment. He may have thought he had relieved perma-

nent cases in which the symptoms returned, but who of us have not had like experience? In Apostoli's last published statements I think he is too conservative. He says he does not claim to have actually cured any case. I am morally certain that by his methods I have cured a number of cases—that the tumors have entirely disappeared. Of course, these cases must be subjected to the strictures made in the opening of these remarks. The cures may have been spontaneous, but in many of them the cure followed so closely upon the treatment that I feel warranted at least in the inference of relation. During the past two years I have tried the method thoroughly, mostly in my private hospital assisted by Drs. Mitchel and Porter. The treatment is conducted as nearly in accordance with the most advanced and approved rules as possible. My battery has seventy cells, the current in all cases being accurately measured. The cases are selected. My results have been opposed to the views expressed in both of the papers before us. Of course, I have to note improvement in a much larger percentage of cases than cure, and in some cases no improvement.

The statement is made in both the paper of Dr. Mundé and that of Dr. Wylie, that recently Apostoli does not puncture the tumor in any case. This is a mistake; in suitable cases he does puncture—but never through the abdominal wall. My own experience corroborates Apostoli's, that in many cases puncture, through the vagina, brings success where electrical treatment without puncture would do but little good. The criticism of danger is made. With proper precautions the danger is very slight.

Dr. Wylie objects to the current in bad cases of hemorrhage, because of danger, and because of the stenosis which may follow cauterization. Contraction of the uterus, lessening of the capacity of its cavity, is one of the chief objects sought, and one of the efficient and permanent means by which hemorrhage is controlled. This is emphasized by Apostoli. But if the cauterizing electrode is properly prepared so as to protect the cervical canal from the action of the current, stenosis need not be feared.

Dr. Wylie again affirms the absolute freedom from danger from the use of the sharp wire curette. I am going to New York at the first opportunity purposely to witness his method of using the curtte. There is scarcely a week that I do not use this instrument; it is seldom a source of danger, but every now and then, in spite of all the precautions I can em-

ploy, some trouble follows its use. In several instances alarming symptoms supervened, and some years ago I lost a patient from peritonitis after its use. I consider its use more dangerous, other things being equal, in subjects of fibroid tumor than in other conditions.

But to return. It is, in my judgment, scarcely fair to criticise the cauterization of the endometrium, sufficiently to arrest hemorrhage and not to damage the underlying structures, and in the next sentence to recommend the use of the curette, which removes the endometrium and mangles the underlying structures. In this I quite agree with Apostoli. And in this connection we must not lose sight of the unquestioned fact that in addition to arresting the hemorrhage, galvanism from the same session goes further, interferes with the growth of the tumor—which can scarcely be claimed for the curette. Within the past few years, in two cases in which I removed the tubes and ovaries, the hemorrhage continued uninfluenced—in one of these cases the tumor grew rapidly, finally becoming cystic. Finally, let it be understood that I by no means condemn the surgical treatment of certain cases. In cases where hemorrhage is severe and persistent after a fair trial of other methods, especially if the tumor has not attained such size and form as to render the operation extra difficult and hazardous, removal of the appendages should be resorted to.

In every case of rapidly growing fibro-cystic tumor of the uterus, removal of the organ by laparotomy should be resorted to without delay. So, of course, should sub-peritoneal fibroids which are large enough to inconvenience seriously the patient or are manifestly growing, and are pedunculated—all such should be removed, for the operation is comparatively free from danger, and this variety is not amenable to other forms of treatment.

The Grippe, Influenza, La Grippe, Russian Grippe,
Epidemic Influenza, Chinese Grippe.

BY J. A. THACKER, A.M., M.D.

Read before the Academy of Medicine of Cincinnati.

THIS affection, at this time, is creating very great interest over the whole country, and especially in Cincinnati. It is said to be prevailing to a very great extent in this city.

Between six and seven thousand children are reported to be kept from school by it.

Pathologically the Grippe is said to be produced by an animalculus—a peculiar microbe. I have understood that this micro-organism is readily seen by a first-class microscopic objective of not very high power—the lowest of the high power objectives. A good quarter-inch glass of 140° angle of aperture, assisted by the amplification of a deep eye-piece, they say will exhibit it. Certainly an eighth or tenth immersion, with a B eye-piece, if not an A eye-piece, will demonstrate its presence clearly. It is stated, that in order to show it satisfactorily, there are not necessary the complicated coloring processes that are required to exhibit the bacillus tuberculosis. All the preparation that is needed is to spread thinly a very little nasal mucus upon a glass slide and place it under a suitable objective.

We are informed that this micro-organism is of a peculiar appearance—an appearance *sui generis*. A characteristic is its active movements. It is said to be in constant, active motion. In this respect it differs greatly from the microbe found in consumption—phthisis pulmonalis—which is motionless; and being motionless, and requiring such complicated processes in the way of coloring in order to demonstrate its presence, caused some even eminent microscopists, at the first announcement of Koch's discovery of it, to doubt its existence—alleging that the rod-like appearances which were seen on a slide of so-called tubercular bacilli, were but productions of the chemical and mechanical processes to which the preparation had been subjected.

Dr. Nicholas Senn, of Rush Medical College, Chicago, prepared a work on bacteriology, which was published last year, 1889, by Lea Brothers & Co., of Philadelphia. In this work, says Dr. Senn: "In proportion as our knowledge of the etiology and pathology of the different lesions approaches perfection, will medicine assume the dignity of an exact science and a true art. The future progress in medicine will be characterized by original research in the elucidation of as yet obscure etiological and pathological questions. If the nature of a disease is well understood, rational suggestions as to proper treatment will follow as a natural consequence. During the last fifteen years there has been more real advance made in pathology than during twenty centuries preceding them. Bacteriology opened a new era for pathology. The knowledge which has accumu-

lated from the bacteriological investigations of disease has opened new fields of usefulness for the physician. Many diseases heretofore uselessly treated with drugs by the physician, are now successfully treated by surgical measures.

"At this time, medical pathology has almost become synonymous with medical bacteriology. Text-books on pathology of only a few years ago, are consulted in vain for information on many subjects which now attract universal attention. Owing to the activity which is manifested everywhere in the investigation of the microbic cause of disease, the many discoveries which are being made in rapid succession, works on pathology soon become old, and are consigned to the shelves of the antiquarian almost before they have left the press. The author of one of the best text-books on general pathology found it necessary to prepare a lengthy appendix while the book was going through the press, in order to escape the criticism of the reviewer that it did not represent modern ideas. We live in an age of independent thought and investigation. No discovery is accepted unchallenged, and all new claims are subjected to the crucial test of criticism, based on original research. Reputation no longer carries with it the weight of authority, unless the views advanced can be corroborated by the independent work of others."

It is now agreed by pathologists that all infectious diseases are microbic—*i.e.*, have their origin in micro-organisms. Says Dr. Senn: "Bacteriology has rendered the term *miasm* obsolete." The adjective *miasmatic* should, therefore, be displaced from medical works, and *microbic* substituted.

Of course, every one will admit that La Grippe is an infectious disease; for all communicable diseases, as typhoid, typhus, erysipelas, variola, cholera, syphilis, etc., are of that class. The history of La Grippe is that it began in the far East, and traveling westward from city to city, has finally reached this country, and, according to the testimony of many of our eminent physicians practicing here, has finally reached Cincinnati.

But it seems not to be the unanimous opinion among the medical gentlemen of the Queen City, that La Grippe is really affecting the good people of the city. Not a few, from what I have understood, are of the opinion that the large amount of sickness prevailing in Cincinnati of the character of influenza, is due entirely to the remarkable

weather that has been prevailing during the present season. Here we are in the middle of January, a time of the year when we usually have severe cold, snow and ice, but instead, we have been enjoying the warm, balmy air of spring. During the whole of December the temperature was that which usually prevails in May. Along with this most astonishingly warm weather in the middle of winter, there has been a great deal of wet weather. There has been high water in the river for many months. Is it not probable, reason not a few physicians, that the unusual climactic conditions which have been existing for so long a time—that this change of our winter into spring—should affect injuriously the health of our citizens—should be productive of diseases of the respiratory organs? It seems to me to be a natural conjecture. In fact, I think it not unreasonable to expect, from the conditions that have been existing, unusual and severe complications of the respiratory disorders that would arise under the circumstances that have been prevailing.

But is there no other method of settling the question whether or not La Grippe is prevailing in Cincinnati at the present time than that of recounting the symptoms which are exhibited in a great number of the cases which are reported to be of the disease, and comparing them with those which are announced by medical men of Europe as characterizing undoubted cases of the affection? If there is not, then the discoveries of the last fifteen years, by which pathology, according to the statement of Dr. Senn, of Rush Medical College, has been advanced to a greater extent than during the twenty centuries previous, are mere fallacies—have not been discoveries at all. If we have La Grippe present in Cincinnati at this time, we have an infectious disease which is produced by a peculiar micro-organism—a micro-organism that produces it, and it alone, and is found in no other disease. Has no one discovered this micro-organism in any of the supposed cases of the affection which have made their appearance here? If no one has, then it is only a matter of conjecture that it prevails here, and it must continue to be but a conjecture until it has been shown. However strong the evidence may be, as regards symptoms, that an individual has died from the effects of poisoning by arsenic, yet a party can not be convicted of administering the arsenic unless a chemist can find the metal in the alimentary canal, or in the tissues of the

body. A demonstration of the presence of the metal is positively required for conviction. But can not a case of poisoning by arsenic be demonstrated as strongly by the symptoms present in the case, as can a case of La Grippe by symptoms?

Physicians in Europe who have had experience with undoubted cases of the disease, report the symptoms somewhat as follows (I say "somewhat," for all cases do not have precisely the same symptoms): There are pains of the muscles of the limbs. The patient usually complains of more or less headache—sometimes a very severe headache—and of soreness of the throat. The mucous membrane of the nasal passages becomes congested or subacutely inflamed, attended with sneezing and a constant discharge of thin mucus. At first there is often a feeling of chilliness for a few hours; sometimes shivering or rigors. Pyrexia of more or less severity follows, the thermometer registering sometimes as high as 103° , especially at night. These symptoms continue, it is stated, from forty-eight to sixty hours, when often a profuse diaphoresis sets in.

There is a tendency for the soreness of the throat to find its way to the bronchial tubes, when the disease may become greatly protracted, and a fatal termination may result.

I have been having for several weeks many cases of so-called Grippe. With some the symptoms have been very similar to those I have just described. In most of the cases, however, that I have attended, there has been pneumonia—generally, however, not of a serious character, but sometimes presenting dangerous symptoms. But, so far, I have not had any cases prove fatal. But really the most marked and severe case that I have had, occurred about the first of October, when, so far as I had learned, no case of Grippe had been reported in this country. The patient was a gentleman who had greatly exposed himself; having gotten wet on a chilly day, and keeping on wet clothes for some hours. The nasal mucous membrane extending up into the frontal sinuses became inflamed, and for several days he suffered intensely with headache. There was sneezing and a constant discharge of a thin nasal mucus. There was fever, sore throat, a hacking cough, etc. Of course, as would be expected in such a case, there was fever. He was sick for several days. In his case there was no tendency to pneumonia.

It never for a moment occurred to me that this was a case of La Grippe, and yet I have no doubt many of our Cincinnati physicians, if they should meet with such a case at this time, would have no doubt but that it was a case of La Grippe.

Mr. President, in conclusion, permit me to suggest a plan for determining beyond a doubt whether or not an epidemic of La Grippe is at this time prevailing in Cincinnati. As it is agreed, however confirmatory the symptoms may have been, that poisoning by arsenic can not be certainly demonstrated unless the metal itself be found, so it can not be proven by argument, in my opinion, that we have La Grippe among us. The only means of demonstration is to show the microbe by means of the microscope. I suggest, therefore, that the President of the Academy appoint a committee of five physicians, known to be skillful microscopists, to examine the nasal mucus, and whatever excretions in which the peculiar micro-organism may be found, so as to demonstrate, if possible, beyond dispute, whether or not the cases that are reported to be La Grippe, are cases of that disease or not; thus proving beyond peradventure whether or not an epidemic of this affection is prevailing in Cincinnati.

APPOINTMENT OF A COMMITTEE.—After the conclusion of the reading of the paper considerable discussion upon the subject of the paper, La Grippe, followed, a number of the gentlemen of the Academy arguing that the great prevalence of diseases of the respiratory organs existing at present in Cincinnati, was due to the remarkable climactic conditions that have been operating since the close of last summer. One gentleman took the ground that La Grippe was but a form of intermittent fever due to an unusual prevalence of malaria, but this view of the cause of the affection did not seem to meet with favor.

At the conclusion of this discussion it was resolved, as suggested by the author of the paper on La Grippe, Dr. Thacker, read during the evening, that a committee of five members of the Academy, microscopists, be appointed, the President, Dr. Wm. Judkins, to select the members, to determine whether or not there is prevailing in Cincinnati, at the present time, an epidemic of an infectious disease known as La Grippe, which is said to have for its cause a peculiar micro-organism which can be found in the nasal

mucus and other excretions of those affected with the disease.

Dr. Judkins selected the following gentlemen to constitute the committee: Drs. J. A. Thacker, James M. French, O. L. Cameron, J. C. Oliver, Leonard Freeman.

Practical Hygiene.

BY R. R. HOPKINS, M.D., RICHMOND, IND.

PURE atmospheric air consists of nearly twenty-one parts, by volume, of oxygen; about seventy-nine parts of nitrogen; .035 parts of carbonic acid gas, with minute traces of ammonia and sodium salts; and, usually, traces of ozone, together with watery vapor—which varies much in quantity, and usually more or less organic matter, in the form, probably, of both dead and living structures. As air is the first essential of life, pure air is the first essential of health. It might be inferred from the physiological evidence of the paramount importance of proper aeration of the blood, that the breathing of air, rendered impure from any cause, is hurtful, and that the highest degree of health is only possible when to the other conditions is added that of a proper supply of pure air. Experience strengthens this inference. Statistical inquiries on mortality prove beyond a doubt that of the causes of death which are usually in action, impurity of the air is the most important. Individual observations confirm this. Air may be rendered practically impure, or unfit for the purposes of respiration, by a change in the proportion of its natural constituents; as by an excess of carbonic acid, or a deficiency of oxygen. The constituents of the air are kept equalized by the great bodies of water that surround us, as well as by the astronomical revolutions of the starry planets in the heavens. The seas and oceans are a great fountain of life and health. They play a very important part in the grand economy of nature. Swept by the incessant winds, its vast surface continually inspires the various gases which load the atmosphere; in its enormous mass it engulfs the debris carried down by the rivers and streams which have washed the continents and islands, and restores to the atmosphere, in the form of vapor, those purified waters which descend upon the earth in the shape of rain, snow or dew. These waters again flow back into the ocean through the streams, the brooks and the rivers; and thus an

eternal circle is established, an unending voyage, which makes the same waters serve for the support and renewal of the world's organic life. The ocean, by its exhalations which refresh and moisten the air, nourishes vegetable life, and furnishes the necessary aliment for those admirable channels of running water that are ever flowing and yet never empty. But for the beneficent influence of the vapors which every moment escape from the surface of the oceans and other great bodies of water, the whole earth would sicken and wither into an inanimate desert. If the ocean would suddenly dry up, all organized nature would be annihilated. The earth would become so charged with a deadly gas, that man or any land animal could not exist. It would be put in the same condition as it was before its reception for man. By the great plan the Author of nature has made and carried out, a world of disorder has been transformed into one of life and beauty; peopled at different stages of its existence with beings suited to its condition; improved with each successive change, until it is as a delightful garden, where the fragrance of flowers sweetens every breeze, and crystal streams flow, whose ascending vapors make green the overhanging branches where sweet warblers sing from fullness of joy. As all the elements are prepared for the reception of man, then we should learn to keep well. A man gets into the habit of working early and late; of bolting his meals, and going straight from the dining-room to his desk; he rides between his office and his house, to save time, and, in short, makes a machine of his body, and another of his mind. Presently both revolt. Neither of them likes this regime of all work and no play. The body wants rest and fresh air and exercise; the mind wants relaxation and recreation. Each begins to assert its individuality and conspire for its rights. The man feels heavy and dull. He does less in two hours than he used to do in one. He has no appetite, or his meals do not agree with him. His sleep is broken, and, at last, he begins to wonder what is the matter with him. His next bright idea is that the doctor will tell him, and that the doctor will set it all right. So, to the doctor he goes. Now, once in a long while he will find a physician, worth his weight in gold, who will tell him, what the great stupid ought to know well enough without any telling, that his bad health is owing to non-physiological habits, and the only way to get well is to give up these; but most doctors will feel his pulse, and look wise at his tongue.

and general countenance, and cry "liver trouble," and scribble a Latin prescription copied perhaps from somebody else, and send this unobserving creature, who neglects his health through ignorance of his physical forces, to accumulate money which he will not live to spend, in place of taking a little time to talk to him of the errors he is committing, and charging a reasonable fee for it, in place of charging for the prescription or medicine he has given him.

Now, every man and woman who gives the least attention to the workings of his or her physical system, ought to know, better than the doctor can tell, what is, as a general rule, best for himself or for herself, in all except acute attacks and all ailments which refuse to yield to strictly hygienic living. If there is an acute, chronic or organic trouble, the habits of life should be strictly questioned, and change those that are not altogether healthy. If, after giving this course a fair trial, there be no change, it is then time for us to begin to apply our knowledge of remedies. There is nothing that makes a doctor so cheerful and hopeful as to get hold of a patient who has lived a regular life, and on whose self-control and good sense he can depend. In such cases the battle is half won. We shudder when we hear of the sudden deaths of those who seemed, up to the last moment, to be in good health. Some of us are ready to say, What matters it how I live, since death is liable to spring upon me at any moment? And I reply, that by far the greater number of sudden deaths from disease have had a long chain of aggravating and predisposing circumstances, of which sudden demise is but the natural and legitimate culmination and sequel. "Know thyself" holds equally as good for the physical as for the mental organization of man. If persons were to live in a house all their lives, and spend all their time in keeping it well ordered, how could they expect a stranger who should stop before it suddenly some day, to know at a glance just where everything was just as well as they did themselves, and to be able to decide in a moment, without any previous preparation, just what was out of place here or what was lacking there? This is just what many people expect of a doctor. It is true, we have studied medicine, anatomy, physiology, and all the different branches of our art. But every disease has a cause; a chain of circumstantial evidence connected with it, which no one knows but the one afflicted. Then, to get at its history, no one but the one afflicted can bring it up properly. It is the

same with every one of our physical and mental idiosyncrasies. Then, every one must see that nobody can serve them so effectually from a sanitary point of view, as they can themselves, unless the subject has been brought into that condition by carelessness or ignorance ; brought themselves into that critical state where seconds are golden, where all that is done must be done quickly and promptly, where both mind and body are so worked upon that another must take the helm for them. Yet how many persons go blindly and passively to the doctor, taking none of these things into consideration, expecting him almost to heal them with a word ; as if he had some divine revelation direct from heaven. He is rushed to with every little finger ache and ear-ache, when a little common sense, a little reflection upon the principles of practical science, would teach what to do. There are many people who seem to think that a doctor is omniscient and omnipotent, and that a cold sponge bath or a daily morning walk of an hour, or some simple application which they knew very well beforehand was needed, must work some miracle for them just because he has authorized it. I think this tendency to go blindly to another for help must be due to that feeling implanted in the human heart which makes us reach our hands up, as it were, to take hold upon something stronger than we are. We are always feeling around us for something wiser than ourselves, to which we may cling. Every intelligent and thoughtful man or woman ought, after a little experience, to be able to do better for himself or herself, in all but sudden emergencies, than any one else can.

Some careful observation, some reasoning upon facts, some reference to the past, some taking into consideration the present, some allowances for the future, will enable nearly all to so order their physical lives that, under ordinary circumstances, they will run on with passable smoothness. Every human system has its own individual deficiencies and needs—deficiencies to be studied and remedied, needs to be met, and stumbling-blocks to be guarded against. Each person can learn to make a diagnosis of his own state of body, and ascertain what is best for it. Every person of any intelligence can soon learn to know what things agree with his stomach better than any one else can tell him. Every person should know, too, under what circumstances they are most liable to take cold ; what degree of heat or cold is necessary to their health and comfort ; and from experience,

what quantity of clothing to wear, how far they can walk without overfatiguing themselves, what amount of labor they can bear under physical exertion, how much mental labor they can bear in a given time on an average, and which of them agrees with them best; also whether they are best suited for sedentary or active employment. These are the things that exercise the greatest effect upon the health. It is inattention to these details which generates acute and chronic diseases, and calls out and confirms hereditary and constitutional complaints; dissipation being left out of the question, for the reason that we will have to disagree with the article of October, 1889, in the CINCINNATI MEDICAL NEWS; particularly on page 656, the twenty-third line from the top, the doctor forgot to say than an hereditary disease or sin might light upon the third or fourth generation. As we dislike discussions in this way, we will pass on. It is the province of hygiene to build up, of medicine to alleviate. One cures, the other alleviates; and nature cures. Hygiene prevents the contracting of disease, thus doing away with the need of medicine. Above all, avoid the common error of taking the habits and capabilities of others as your *vade mecum*. "Such a man works eight hours a day, and so I ought to work the same length of time." No such thing. If you are stronger than he, you may work longer without hurting yourself. If you are not so strong, you should not work as long as he does. Another man's hours for work and rest and recreation should be no criterion for you. If we are wise, we will so order our lives as to meet the needs and capabilities of our own minds and bodies, in so far as our circumstances will allow. In this respect we are either our own best friend or our own worst enemy; self-knowledge and a proper application of it are the only guarantees for sound health and long life, as our own physical organization is our best and most reliable physician. But it must be taken care of, or the silver cord will be loosed.

In scanning over the history of the past for a thousand years, there may be seen standing boldly out in front of all their fellows, the names of the bright particular stars which have illumed the paths of science, and we of the nineteenth century have before us not only the great learning of Aesculapius, Hippocrates and Galen, but the combined research of all the past; and if, to-day, we do not know all the shoals and breakers against which the scientists of the past and present have dashed in their attempts to

solve the great beyond of their theories, it is the fault of our own selves, and not because of the absence of opportunity. While men of the deepest learning are plodding amid the dark abysses of pathology, microscopy, chemistry and physiology, we utilize their labors in the direction that will benefit us in the achievements of science. If we study well the normal condition of an organ, it is much easier to know its pathological condition. The instinctive desire, then, of happiness, common to all persons, often leads them to seek their enjoyments in a gross and vicious indulgence of their animal appetites. These appetites form a part of the complex machinery of our compound life; and, when subjected to proper regulation by our intellectual and moral faculties, they never work any harm; their gratification being pleasurable, and only so when conformed to the laws of nature. They furnish a certain quantity of happiness through the medium of the body. As advertisers of certain physical wants and incentives to specific modes of action, they have their function and utility. Without them, the organism of life, under the present constitution of things, would be extremely defective. Considered, however, in their relative rank, whatever may be their strength, nothing is more evident than that these appetites were never meant to be the governing principles of human nature. Subordination is their proper position. Their dominancy uniformly enslaves the spiritual man, undermines all the foundations of virtue, introduces confusion and disorder, and in the end blasts the happiness of the ill-fated victim. These results are not accidental and occasional, but uniform and regular; demonstrated by the sure test of experience. Take, for example, the glutton—who loads his body with more food than he can healthfully receive; who acquires a morbid and excessive appetite, and indulges it without restraint; and we behold a stuffed sensualist, entirely overtaxing his gastric power, impairing his mental force, paving the way for numerous forms of disease, lowering the tone of his moral sensibilities, and sinking himself to the level of a mere animal in the most disgusting self-ruinous manner. Many a one has died with apoplexy, for no other reason. He has killed himself by eating as truly as if he had plunged a dagger to his heart. Again, dangers of pork eating. We must not forget in this place to speak about it. The hog is by nature a scavenger, and is especially adapted for that purpose. Let him then pursue his natural calling, and classify him

with the buzzard. Did Moses know more about pigs than we do? Was it a knowledge of the parasitic disease common to man and swine which led the father of the Jews to condemn pork as human food? He said it was unclean, for it was a command from God. How wise and sanitary. Then was the command, "It is unclean unto you: ye shall not eat of their flesh nor touch their dead carcass." Although it may not be said that this law still exists and is binding upon all mankind as a moral obligation, it is quite plain that the physical basis upon which the law is founded is as good to-day as at any previous period. Could it be proved that the hog had kept pace with advancing civilization and had improved in his habits, we might possibly find more tolerance for him; but he is evidently just as unclean as ever, and just as unfit for food. The Mohammedans as well as the Jews abstain entirely from the use of pork. Such is also the case with some other tribes of Africa and Asia.

Dr. Adam Clarke, when once requested to give thanks at a repast of which pork constituted a conspicuous part, used the following words: "Lord, bless this bread, these vegetables and this fruit; and, if thou canst bless under the gospel what thou didst curse under the law, bless this swine's flesh." Again, Mr. Clarke thought of one appropriate use to make of him. He said that if he was going to make an offering to the devil, he would employ a hog stuffed with tobacco. The dirty creature will turn away from the nicest bed of straw, to revel in a stagnant, seething mud-hole. If one of his companions dies in the lot or pen, he will wait until putrefaction occurs, and then greedily devour the stinking carcass. The filthy brute will even devour his own excrement, and that when not unusually pressed by hunger. Again, observe him closely; make him straighten out his fore-leg. Do you see an opening sore or issue a few inches above his foot, on the inner side? Do you say it's a mere accidental abrasion? Find the same on the other leg, and the same belongs to every hog alike; it is a wise and wonderful provision of nature. Grasp the leg high up and press downward. Now you see its utility, as a mass of corruption pours out. That opening is the outlet of a sewer—yes, a scrofulous sewer—and hence the offensive, ichorous matter which discharges from it. Should you fill a syringe with mercury or some colored injecting fluid, and drive the contents into this same opening, you would be able to trace

all through the body of the animal the traces of this fluid. Sometimes the outlets get closed up by the accumulation of external filth; then the scrofulous, ichorous stream ceases to flow, and the animal quickly sickens and dies, unless the parts are speedily cleansed; and so opens anew the feculent fountain, and allows the festering poison to escape. The word "scrofula" is derived from the latin *scrofa*, which means a sow. The ancient Romans evidently believed that scrofula originated from the hog, and hence they attached the name of the beast to the disease. Saying that a man has scrofula, then, is equivalent to saying that he has the hog disease. After we have seen that the hog is the very embodiment of scrofulous disease, can any one doubt the accuracy of the conclusion of the Romans who named the disease?

We must admit that pork is one of the great causes of trichina. Refer to MEDICAL NEWS, July number, 1888, page 437, and the standard medical authorities. By the eating of pork, the eggs of the tape-worm find its way into the human subject. When this lively migrating germ gets finally settled in the tissues, as we find it in the pig, it soon becomes enveloped in a little cell, and remains quiet until taken in the stomach of some other animal. When it is liberated and speedily develops into a full grown tape-worm, the egg of this parasite penetrates the walls of the blood vessels. They are swept along in the life current, thus finding their way even to the most delicate structures of the human system. They have been found in all the organs of the body; even the brain and the delicate organs of vision, the lungs, and the liver, which is the most frequent rendezvous of these destructive creatures. A most serious and commonly fatal disease known as hydatids is occasioned by the extraordinary development of the cysts, which are ordinarily not larger than a pea, but by excessive growth assume enormous proportions. The same disease may occur in any other part of the body in which the germs undergo development.

In Ireland this disease has become extremely common. In Abyssinia the occurrence of the worm has become very common, owing to the bad dietetic habits of the people. Both Ireland and Abyssinia are a pork eating people. In this country the parasite is more common in pork butchers and cooks. Among the evil effects of pork-eating is the cause of, as well as the arousing of, the latent germ of hered-

itary predisposition ; as scrofula in its various forms or consumption ; also erysipelas, biliaryness, dyspepsia and jaundice. Oftentimes a severe fever results. A partial clearing out then occurs. The liver is overworked in attempting to remove from the system such a mass of impurity as is received in the eating of pork, which enables the individual to pass along for a time, until some epidemic or contagious disease claims the subject as a lawful victim. Dyspepsia, that malady of many forms, is a frequent result from the use of pork, especially when fat, and salted or smoked. Pork is one of the most indigestible of foods, requiring between five and six hours for its digestion. What is lard ? It is animal oil ; an excellent thing for consumption ; a very necessary kind of food for cold weather. Verily truly ; and, we will add, as synonyms, disease, scrofula, torpid liver. Lard, then, obtained from the flesh of the hog by heating, is nothing more than the extract of the animal we have just been talking about. The physician is the one to bring these questions before the people, and to teach them the laws of life and health. Again, a like example, perhaps more common, is furnished by the miserable creature who drugs his body by the habitual use of stimulants or narcotic poisons, violating all the laws of temperance, and seeking happiness in a way to destroy both happiness and body. Follow such a man through all the winding labyrinths of his sad history ; count the woes, the sorrows, the bitter curses which fall to his lot ; observe how he dies as the prey of his own passions, blasted in his physical and mental nature ; conscious of his degradation, yet wanting in moral power to break the chain that binds him ; perhaps weeping over his fate at the very moment in which he pursues it with the direst infatuation ; and hardly another spectacle so horrible can be found within the limits of flesh and blood. Mark the men and women who have surrendered themselves to the supremacy of debauched and licentious habits—as gluttony, prostitution and drinking, or doing anything that will lower the vitality in any way that is intemperate. Behold the imperial inheritance of a spiritual nature dishonored by brutal lusts ! Study the entailments of disease, and the corruptions of both heart and life which enter into the dark catalogue of their history, and who can fail to discover alike the wisdom and the necessity of placing our animal passions under the government of intellectual and moral laws. The truth is, there is no slavery more dreadful than that which

they impose when they rule the individual. Onward they go with increasing fatality. Millions of people—some of them persons of fine capacity, brilliant promise and noble feelings, for whom the gifts of nature and the acquisitions of culture had prophesied a better destiny—have in this way trodden the path of their own destruction. Constitutions crippled, diseased, broken down; mental vigor greatly enfeebled; enjoyments brutalized; consciences perverted and prostrated; character sacrificed and lost; frequently committing crimes that otherwise would not have been committed; premature decay and death. These are among the evils by which we are punished for transgressing the laws of nature. Our animal natures must be taught the law of subjection. This is indispensable to virtue and happiness. Here lies a vital part of our earthly discipline; and just here is one of the most important and in some respects most difficult tasks of life. Parents, in the government and discipline of their children, should teach them how to govern themselves in eating and drinking. All habits that are destructive should be carefully watched by the parents, and corrected. The business occupations pursued vary considerably in their effects upon the system. Where there is a predisposition to lung trouble, avoid sedentary habits; but a life outdoors, in the fresh air, should be followed. Stomach or liver troubles, according to the peculiar position in which the body is to be held, whether out of doors or in doors. The strength and physical force of the individual should be taken into consideration. If the muscular power is too great, it may prove destructive to the constitution by the overaction of the muscles, producing exhaustion. Again, by the action of only one set of muscles, the others not being exercised at all, and more especially, when the body has to be kept in one constrained or unnatural position; and by improper exposures to sudden changes or unhealthy conditions of the weather. Any employment, however unhealthy it is, may be rendered less prejudicial to health by the adoption of temperance, cleanliness, attention to diet, exercise, and attention to bowels. Another error among parents or guardians is the selection of trades or the professions for the children. Those who are delicate, instead of being placed in occupations which will tend to develop and strengthen their systems, and thus promote longevity, have usually selected for them some sedentary business or profession which will most certainly assist in hastening the

downward tendency of their systems; while on the other hand, those of a robust, hardy constitution are placed at the most active, and consequently the healthy, employments. There is no objection to the latter plan, but the former is decidedly wrong. Thus, ascertain whether the occupation be one requiring muscular exertion in the open air, whether too great exertion of the muscles is required, whether all the muscles of the body or only a portion are called into action, and whether the body is to be held in a constantly bent or unnatural position; is the occupation sedentary or not, requiring confinement in close rooms, the inhalation of an impure or dusty atmosphere, any exposure to steam, obnoxious gases or vapors, cold or damp. All persons, whether sedentary or very active, require amusement and exercise. Too much attention to business and little or no recreation is certain to bring on a premature decay of the system, either sympathetic, functional or organic. Every year more and more complaints are made of the poor health that is so common among grown people; especially among women. And physicians say that this is an evil that is constantly increasing; so that they fear ere long there will be no healthy women to rear the progeny of coming generations, as the health of children depends very much on the health of their parents. Sickly and feeble parents have weak and delicate children. When one parent is sickly and the other well, part of the children will be healthy and part sickly. Thus the more parents become unhealthy, the weaker and more delicate the children will become; and when these children become grown and become parents, their offspring will still be more delicate and feeble with every generation. There is much devolving on the true physician to instruct his patrons in the laws of hygiene, of the certain consequences that will result to themselves or their offspring, as well as to look after all causes of diseases or all unhealthy agents that may possibly lurk in places that might not be noticed by his patrons; namely, the dampness of the walls of the dwelling, its location, the cellar, ventilation, the well, the privies; and to the manner of disinfection, the removal of all nuisances. The family should be advised to study carefully the clothing of the children; to so maintain the warmth of the body and the extremities, as may conduce to the comfort of the feelings, and promote a free circulation. The healthy action of clothing is not confined to its property of retaining

warmth altogether, but it is useful also in protecting the body against injurious influences of external heat, dryness, moisture and electricity; and varied modifications of the clothing will best answer these several ends under different circumstances. Fashions are to be disregarded only when they conflict with comfort or health. Look well to the feet, as this is of vital importance; also to the diet of adults as well as children, as these things promote health and longevity. It makes a sound body and a sound mind. Without strength of body, all social and intellectual capacity loses much of its power and strength. Our object, then, is the attainment of truth as revealed in the human body, in its relations to the created universe, as all the aims of hygiene are consistent with the best interest of our race. Those who study medicine most extensively will become most familiar with man's nature in all its aspects; they will become conversant with the sources of physical and moral evil; and, in penetrating the mystery of affliction, we will learn to comprehend the laws by which nature is governed, in her efforts to resist the powers of disease, as well as to aid those efforts in accomplishing their beneficent purposes. The boundary between health and disease, though in some degree familiar to all, is not easily defined. Health, then, is usually described as a condition of the organism, in which there is freedom from pain and uneasy sensations, and freedom from all those changes in the structure or body that endanger life or impede the easy and effective exercise of the vital functions. Departures from this happy state of life present themselves to us both in form and degree, in infinite variety. Disease consists in some deviation from a state of health. It may extend no farther than some simple derangement of function, in which no alteration of structure is discovered or suspected; or it may be attended with appreciable change of texture, and may run a longer or shorter course with or without modification from medical treatment. The former of these grades of disease may often be properly assigned to the care of the hygienist, who, by dietetic regulation, by correct employment of baths, food, drinks, temperature, proper sleep, pure air, may restore the invalid to a state of health. The physician must also be a practical hygienist, and able to employ auxiliary agencies with scientific propriety, as well as to select with certainty the necessary remedy. The province of hygiene is to prevent disease of any character, as well as to

discover whatever causes may have contributed to induce or perpetuate the diseased condition; and, if possible, to remove them. Hygiene alone is sufficient to restore many sick persons to health, and it is in most cases an indispensable aid to therapeutics, in pathological as well as surgical cases. Thus, so far as hygiene is concerned, all schools of medicine occupy the same ground; the philosophy of the science being the same for all, however modified and different in practical application by the different therapeutics of the different schools of medicine.

Selections.

Erythroxylon Coca; its Value as a Medicament.

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DURING the last few years the therapeutic use of coca has been so greatly extended that it may be interesting and useful as a *resume* to enumerate its many applications.

Although coca has, from its earliest introduction as a pharmaceutical product into France, enjoyed the highest professional recognition, this South American plant can hardly be said to have entered into current therapeutics. It is only since the discovery of the scientific application of the alkaloid of *Erythroxylon coca*, and since the important essays on the drug and the experiments made with it, that physicians generally have studied and recognized its therapeutic value.

It is well remembered how, in former years, the virtues of the salts of quinine were held to entirely supersede those of cinchona; in like manner this inevitable error has arisen with coca, its alkaloid, cocaine, only having been considered by many.

In consequence of the tests made with cocaine, which, from a physiological point, have established the dose and the limit of its toxic effect, and, from a medical view, have brought to light cases of abuse which have resulted in more or less serious accidents, many have been led to regard the plant coca itself as a dangerous drug.

The proof of the therapeutic value of the coca leaf is

clearly shown by the many excellent results obtained in practice with such reliable preparations of the drug as have been furnished the profession by the worthy pharmacist, Mariani.

As to the comparison which many of our *confrères* make between the preparations of cocaine and of coca, we do not fear to state that, however sound may be the theory of preferring to administer certain alkaloids to administering a preparation of a plant of which the virtues vary according to where and how it was gathered, the place of its cultivation, its quality, and the constitution and nature of the preparation—we repeat, we do not fear to state that in the majority of cases, as the alkaloid does not contain all the active principles of the plant, it can not be preferred, except in special cases where the particular action of the alkaloid alone is desired.

The fact is well established that the salts of quinine can not replace the extract, the wine, or the powder of cinchona, the tonic principles and the essential oils of which have, without doubt, shown a special therapeutic value; and I need merely cite the indisputable success obtained by Professor Rousseau with the powder of cinchona in checking malarial fevers which had resisted even the largest doses of sulphate of quinine. More especially cocaine can not replace all the active principles and the essential oils of the leaf of *Erythroxylon coca*, as has been proved from the time of the earliest discovery and use of this plant.

In 1887, at the Institute of France (Académie des Sciences), and in 1888 at the Académie de Médecine, I demonstrated that coca, by virtue of its active principles, had three very distinct separate actions (published in the "Proceedings"):

1. As an anæsthetic, acting upon the protoplasm of the terminations of the sensory nerves, preventing the transmission of painful sensations to the centers or the unconscious sensibility of Bichat.
2. As a nerve tonic, producing functional excitement of the cerebral and spinal nerve centers and increasing the intellectual and muscular activity.
3. As a tonic to the unstriped muscular fibers of the stomach, the intestines, and the bladder, producing functional excitement of the constrictor action of the great sympathetic nerve, with consequent functional exaltation of all the smooth muscular fibers or muscles of organic life.

The dissatisfaction produced and the complaints which are made that the plant is wanting in uniformity of quality, and is unreliable in producing the desired effects, are due to the varying quality of the preparation.

An essential requisite to produce reliable uniform preparations of coca is a thorough knowledge of the origin of the leaf, its nature, and its quality.

Careful study and researches made by Mr. Mariani for many years, as to the origin, the nature, the species, the culture of the different leaves of coca, and the care which he gives to his preparations, have been the means of placing at our disposal products uniform in quality and unvarying in their effects in those varied cases where their internal administration is called for.

I will cite but a few names among those of my many *confrères* whose recorded experience with the Mariani coca preparations coincides with my own, which I am about to set forth, based upon continued observation in hospital and private practice.

It has long been known that the natives used the coca leaves to lessen fatigue, to keep up the spirits, and to appease the cravings of hunger.

The first and main application of the "vin Mariani" is, therefore, as a general tonic for persons either physically or mentally overworked (Brown-Séquard, Germain Séc, Du-jardin-Beaumetz, Ball, Bouchut, A. McLane Hamilton, A. E. Macdonald, A. L. Ranney, L. C. Gray, L. Weber, Carlos F. Macdonald, J. Leonard Corning, H. M. Lyman, I. N. Dan-dridge, P. S. Conner, J. K. Bauduy, C. H. Hughes); in convalescence after lingering wasting diseases, where nourishment is needed and where it would be dangerous to overcharge the stomach; with all whose recovery is tardy from wasting or constitutional weakness; in chlorosis, anæmia, and rha-chitis (Ch. Robin, Durand Fardel, Gubler, De Piétra Santa, Fordyce Barker, Isaac E. Taylor, A. L. Loomis, W. T. Lusk, F. P. Foster, C. C. Lee, J. J. Henna, L. L. McArthur).

It is further used in diseases more especially referable to atony of the smooth muscular fibers, among which we class atony of the stomach. In dyspepsia, in those very common cases where this organ has become weak and torpid, is distended, and fails to secrete gastric juice, coca is well indicated (De Saint-Germain, Cottin, Dieulafoy, Salemi, Com-panyo, Rabuteau, A. J. C. Skene, P. A. Morrow, T. C. Giroux, Hunter McGuire, E. R. Palmer, O. O. Burgess, J.

R. Leaming, Daniel Lewis, T. E. Satterthwaite, W. H. Pancoast, D. F. Woods, J. N. Hyde, L. G. N. Denslow).

It is also serviceable in weakness of the vocal cords, in the case of ministers, singers, actors, teachers and orators (Ch. Fauvel, Morell Mackenzie, Lennox Browne, Botkine, Cozzolino, Zawerthal, Poyet, Coupard, Fraenkel, Marius Odin, Labus, Massei, Louis Elsberg, R. P. Lincoln, Beverley Robinson, W. C. Jarvis, H. H. Curtis, C. C. Rice, C. E. Sajous, E. Fletcher Ingals, H. Schweig, T. R. French).

It is, moreover, of value in weakness of the vascular organs, with the anæmic, the plethoric, where, principally on the face, the small blood-vessels show enlargement or venous arborescence which points to a similar state in the vessels of the nervous centers. The same vascular weakness is also observed with the varicose, in whom coca is indicated; likewise with the paraplegic, with whom it regulates the circulation of the nervous centers (Bernard, Bétançès, Landowski, Casenave-Delaroche, Gazeau, Rabuteau, V. P. Gibney, Robert Newman, E. B. Bronson, J. E. Janvrin, B. McE. Emmet, W. O. Moore, W. J. Morton, D. W. Yandell, J. H. Etheridge).

It may be also as a regulator of the nervous centers that the infusion of coca known as the Mariani produces such marvelous results in mountain-sickness, in sea-sickness, and in the vomiting of pregnancy. It is well remembered how this preparation sustained the illustrious General Grant during several months (Cuffer, Letellier, Dérrécagaix, Trossat, Bouloumie, Dechambre, Fordyce Barker, G. F. Shrady, J. H. Douglas, H. T. Hanks, G. R. Fowler, J. M. Keating).

From a psychological point of view and from mental pathology it may be stated that coca is the only drug which successfully combats melancholia, low spirits, and all forms of depression of the nervous system, upon which it acts "like fulminate," to use the felicitous expression of Professor Gubler.

Phenacetine.

THIS new antipyretic was first used in 1887 by Dr. Kobler and others, and its use is now sanctioned by a very large number of the leading practitioners of the day. In two short years it has attained a popularity which is phenomenal in a new therapeutic agent, a condition which is chiefly due to the fact that it possesses marked advantages

over all other remedies of its class. Dr. Dujardin Beau-metz, of Paris, says:

"The para-acet-phenetidin occurs as a white crystalline powder, liquefying at $135^{\circ}\text{C} = 275^{\circ}\text{F}$, barely soluble in water, very slightly soluble in chloroform, insoluble in glycerine, acidulated water, hydro-chlorate of ammonia, oils and liquid vaseline.

Physiological Action.—To a rabbit weighing two kilogrammes we have succeeded in administering thirty-seven and a half grains without producing any toxic effect. MM. Misrachi and Rifat also gave to a fowl weighing 1.15 kilogramme eighteen grains of phenacetine without inducing any sign of poisoning. They have even given to animals thirty grains of the drug per kilogramme of their weight without untoward effect. It may thus be said that, if phenacetine is toxic in character, it must be so to but a very slight degree.

Therapeutic Action.—Like all the analgesic antithermics, the phenacetines have a double action: they lower temperature and soothe pain. The lowering of the temperature is most noticeable in cases of pyrexia; in fevers, seven and a half grains of phenacetine lower the temperature by 1° to 2°C . (1.8° to 3.6° F.) and the antithermic action following such a dose lasts four hours. In certain cases, however, the apyrexial period is prolonged even from the same dose; it may even reach eight to ten hours, as indicated by Kobler and Hoppe. Misrachi and Rifat suggest that a dose of seven and a half grains be administered every four hours, to maintain the condition of apyrexia in those suffering from fever; even continued for a considerable time, these doses had never given rise to the slightest accident in fever patients. As with all the antithermics of that class, there is invariably observed abundant sweating, and often a sensation of collapse. Phenacetine, then, in febrile conditions, shows itself superior to antipyrin and acetanilid in producing marked antithermic effects without toxic phenomena. But I would, nevertheless, say that in fevers the dose of 1.0 Gm. (fifteen grains) should never be exceeded.

But it is above all as an analgesic that phenacetine out-rivals its predecessors. While it is quite as powerful as antipyrin and acetanilid, it does not cause the pain in the stomach, or the scarlatina-form rash of the former; nor does it give rise to the cyanosis of the latter. However prolonged may be its administration—and we have given it for

months in doses of 1.0 to 2.0 Gm. (fifteen to thirty grains) per day—we have never observed any bad effect. We have used it for the relief of every form of pain (neuralgia, migraine, rheumatic pains, muscular rheumatism, acute articular rheumatism, the lightning pains of tabes, etc.), and always with the best results. Further, in cases of hysteria, and of hysterical or neurotic pains, phenacetine has seemed to produce better effects than the bromides; it calms the excitability of the nervous system, and in some obstinate cases of nervous insomnia it procured sleep. Phenacetine seems therefore to be not only an analgesic, but a narcotic.

This double action, as an antithermic and an analgesic, results probably from the effect produced on the spinal cord; and phenacetin may be considered a depressor of the excitability of the medulla, but on this point I can not speak conclusively till the investigations carried on in my laboratory shall have been completed. Here, as in many other cases, clinical experimentation has preceded physiological research."

In a recent editorial in the *Medical and Surgical Reporter* we find the following comments :

"Phenacetine is one of the latest antipyretics that has come into professional favor; and although it is closely allied in action and in chemical composition to its twin sisters, antipyrin and antifebrin, clinical experience teaches that it possesses certain peculiarities which place it in the front rank of this class of remedies. Like the two latter, it is not only useful as a fever-reducing agent, but it also displays a remarkably beneficial influence in diseases of the nervous system. It is indeed very probable that all these substances exert their therapeutic properties by virtue of their strong affinity for the nervous system; notwithstanding the fact that this feature was altogether unobserved when they were first introduced to the profession. It is always a cause for much congratulation, because it is an indication of normal development, when, as in this instance, independent researches, carried on in the different branches of the same science, yield evidence of a reciprocally confirmatory character. Previous to the discovery of the antipyretic action of these coal-tar products, there were investigations in progress which showed both from an experimental and a clinical standpoint that the essential lesion of fever consisted in a disordered state of the heat-regulating centers of the nervous system. So long as fever was believed to be due prima-

rily to supra-oxidation of the bodily tissues, as was taught by the older pathology, the *modus operandi* of every antipyretic was more or less enshrouded in a cloud of darkness; but when subsequent observations demonstrated that phenacetine and its allies produced antipyresis by reason of their marked affinity for the nervous system, the neurotic theory of fever was so much richer on account of the additional evidence which it received from this quarter.

Whatever its manifestation may be, therefore, it is clear that the fundamental action of phenacetine is concentrated on the nervous system, and it is well to bear this feature of its action in mind while administering it. As an antipyretic it is in many respects superior to either antipyrin or antifebrin. This is true of it in acute as well as in chronic fever. In the experience of others, as well as in our own, it has been known to reduce acute fever in cases in which both of the latter agents had signally failed. Not only does it appear to be the most effectual antipyretic, but it also seems to be free from producing any toxic effects unless it is given in very large doses, while both antipyrin and antifebrin are prone to give rise to these—the former to a cutaneous rash and the latter to a cyanotic condition of the blood.

Phenacetine is especially valuable in suppressing the fever of pulmonary consumption. In this, as in every other chronic form of fever, large and probably double doses are required to achieve the same end as that which is obtained in acute fever. Of course, no iron-clad rule can be laid down as to how much should be given in any individual instance. The best guide that can be followed is to give it "for effect." If four or five grains administered every four hours do not suffice to bring down the temperature, there should be no hesitation in giving from ten to twenty grains. Ordinarily it will be found, however, that from five to ten grains is all that is required in such cases. It also has a modifying influence on other symptoms of this disease. Simultaneously with the reduction of fever, the cough becomes easier, the expectoration diminishes, and a general improvement in the patient's condition follows. From this it will be seen that phenacetine does good, not only as an antipyretic in pulmonary consumption, but also as a constitutional tonic—a role which it undoubtedly plays through its action on the nervous system; and for this reason it renders useful service, and its administration should be contin-

ued in three or four grain doses three or four times a day after the fever has abated.

That which is true of phenacetine in pulmonary consumption also holds true in chronic bronchitis, whooping-cough, migraine, neuralgia, neurasthenia, etc., when it is given in three or four grain doses; and from all appearance it bids fair to outrival antipyrin and antifebrin in the treatment of all adynamic conditions of the nervous system."—*New England Medical Monthly*.

Murder by Chloroform.

THE recent alleged case of the murder of one woman by chloroform, while asleep, and the narrow escape therefrom of her female companion in the same room, has brought up for discussion the possibility of such an occurrence, and the ventilation of many theories of the supposed means to such an end. Two women are said to have been sleeping in one bed, burglars enter the room, chloroform both the sleepers, and decamp. One of these is found dead in bed, with a portion of the coverlid, said to smell of chloroform, over her face; the other lying in a helpless condition on the floor, and apparently too dazed to give any consistent and intelligible account of her condition. The husband of the dead woman, a dentist, was away from home at the time. The results of the autopsy upon the woman are said to be so unsatisfactory as to cause the coroner to inquire into other probable causes of death than the one suggested.

Without attempting to anticipate a verdict in this case, the questions of possibility and probability of murder by chloroform, and while asleep, offer some interesting points from purely unbiased and strictly scientific standpoints.

Very soon after the discovery of chloroform as an anæsthetic, and the wide publication of its wonderful powers, fears were entertained of its more or less extensive use by burglars and other criminals. Notwithstanding, however, this feeling of alarm, which at the time was shared by many legislators and other leading men in Great Britain, agitated as it was by all sorts of exaggerated propositions, there has been little, if any, experience in the jurisprudence of such cases up to the present time. Scarcely a dozen of these have come before the courts, and these were either for burglary or felonious assault, but never yet, as far as we can

ascertain, for murder. In no instance has it been proven that chloroform, when alleged to have been used at all for either of these crimes, was to any purpose.

Dr. Snow, the eminent authority on anæsthesia, boldly expressed his belief in that direction many years ago, and more recently the exhaustive paper on the subject by the late Stephen Rogers, of New York, placed the possibility of the use of chloroform, for burglarious purposes at least, almost beyond the pale of argument. After examining with critical care the alleged cases in which such attempts were made, he very properly concludes that there is great liability to err on the part of courts, unless, upon detailed inquiry into the circumstances and manner of giving the chloroform, they be found consistent with the thoroughly well-known facts and phenomena uniformly attending the administration and action of the agent.

The same conclusions would apply with especial force to the supposed cases of murder, especially when the crime is alleged to have been committed while the victim was asleep. Concerning the latter element of this proposition, enough has already been written to place the settlement on a very well-recognized basis. The numerous observations regarding the possibility of inducing anæsthesia during sleep have quite conclusively shown that it is only with the greatest care on the part of an experienced practitioner that such can be accomplished at all, and then only in exceptionally favorable cases with particularly fortunate surroundings. Again, while this condition of things can be sometimes produced with infants and young children, as shown in many cases, one of which is reported in this issue, it is virtually impossible in the cases of adults.

The interesting observations of Dr. J. H. Girdner, of this city, on this point, prove how easy it is to awaken suddenly and with alarm the soundest sleeper at the very commencement of the inhalation, even when the napkin containing the chloroform is held a considerable distance from the face. Aside from the favorable surroundings necessary for success in these cases, the element of time in the effective administration of the drug is no inconsiderable one to take into account, adding as it does a proportionate risk of detection in the act.

Considering also the comparative rarity of induced anæsthesia without struggle, noise, or vomiting by the victim, the chances of being discovered are increased in proportion.

Such incidents also would be likely to alarm the criminal even more than the victim, in fear that, if not detection, actual murder might be the result.

To return to the case which forms the text of these comments, a few pertinent inquiries suggest themselves as bearing upon the theory of chloroform-murder by burglars. How could the deed be accomplished as explained by the fact that one of the victims was found dead in bed and the other lying on the floor? Which one was chloroformed first? Is it possible to conceive that, lying side by side, one or the other would not be awakened to give an alarm, even if the drug was administered to both at once? Or, was one promptly strangled, and the other simply overcome in her struggles subsequently? With one murder staring them in the face, what would have been the incentive of the criminals to commit another against such desperate chances as a determined and desperate resistance by the remaining victim?

The autopsical revelations may make many points clearer than at present. The main one to prove is, whether or not chloroform was the lethal agent at all; but more difficult than all will it be to explain how the deed was actually done, consistent with the well-recognized difficulties of chloroform administration under such circumstances. The responsibility of settling these questions must, however, rest with the jury which shall try the case.—*Editorial in Medical Record.*

Hæmoptysis.

BY WILLIAM F. WAUGH, A.M., M.D.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE IN THE
MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

THIS man comes to us complaining of shortness of breath. He is a railroader; he does not use alcoholics, and there is no reason for this trouble so far as he knows. He had to stop work four weeks ago; he coughs and spits up blood, and the curious thing about the cough is that remedies have no power to control it. Why then should this man spit blood? It is a symptom in certain young people of feeble constitution or suffering from scrofulosis. When they develop rapidly, the walls of their blood-vessels are feeble,

and they have bleeding while young, or bronchial epistaxis after the age of twenty. I have taught you that this is not an indication of consumption, but a liability to it. Dullness on percussion with haemoptysis used to be regarded as indicative of tubercular consumption of the lungs, but they are really signs of chronic, simple inflammation of the lungs—pneumonic infiltrations that are liable to become tuberculous. In acute bronchitis you may have some blood brought up; in pneumonia you have a rusty or bloody sputa, and if the lungs are intensely hyperæmic you may have considerable blood. Obstruction of the circulation usually shows some of its signs in the lungs, such as constant dyspnoea, extravasation of blood from the capillaries and constant spitting of the same.

In the present case the first and second sounds of the heart are prolonged and replaced by murmurs. The patient has mitral and aortic insufficiency, without any stenosis, and the result of this is to cause hypertrophy of the heart muscle. This man has passed through the condition of hypertrophy, even though he never noticed any forcible beating of the heart during the last two or three years. Now he is reaching the period of failure in compensation, but dilatation has not developed to any extent.

What shall we do for him? He is now in one of the most difficult conditions to treat. During the last year or two we could have given him relief by arterial sedatives. It is too soon yet for digitalis. Bromide of potassium and morphine may relieve his cough. We will limit him to dry food to lessen the action of the heart; roast or corned beef, and no liquids with the meals. Besides this, he must keep as quiet as possible, and not do any work. He must keep the bowels open. Gelsemium is an arterial sedative, and will also allay the bronchial irritation. If he doesn't sleep well, we will give at night:

Ry—Potassii bromidi	.	.	.	.	gr. xx
Morphinæ sulph.	.	.	.	.	gr. $\frac{1}{8}$

We will order him, therefore, tincture of gelsemium every few hours. We need not be afraid of the blood from his lungs; a slight hemorrhage from them would do him good, as it would relieve the hyperæmia. If this man did not have to go back to work, he could live twenty years, as far as his heart is concerned; but if he must work he will not live ten years, and if not under the care of a physician he

will die in less than two years. Always lay down the law to these patients and tell them what you can do, what they can expect, and what the results and the consequences may be, and then, if anything happens, you will have done your duty at least.

FUSIFORM ANEURISM.

This man came to our clinic five years ago and presented the following history: He was an iron founder, and had a peculiar condition that might have led one to imagine that he had two hearts. A distinct thrill could be seen in the second right intercostal space, near the sternum, and a distinct beat at the position of the apex. Examination proved that the second beat in the second interspace was caused by a fusiform aneurism. Auscultation showed no bruit, and we could not discover pressure symptoms; so we were compelled, by exclusion, to diagnose fusiform aneurism or dilatation of the aorta. The heart was markedly hypertrophied. He was treated for ten months and his symptoms subsided, but he went back to work. At present I find the same condition of affairs, and the first sound of the heart is replaced by a blowing murmur, which is heard at all of the four valves. I believe this murmur is due to the hypertrophy, and can not think that there is any insufficiency. His hypertrophy has been caused by hard work and drinking.

SPECIFIC ANÆMIA.

This woman, aged sixty years, a seamstress, came into the hospital some weeks ago and was very ill. She had been sick for three months previous, and before that time had not been in good health for a year. She became weak, pale, anæmic; could not work, and vomited everything she ate. From her cachectic appearance I suspected cancer of the stomach, but this could not be discovered after a most careful examination. There was no ulcer of the stomach. I gave her nutritive enemata, but they caused so much disturbance that I suspected cancer of the rectum; but this was not present. I then examined every organ of the body where cancer could possibly exist, but all signs were negative. Her case is one of anæmia and debility from a specific cause. Two weeks ago her breath was almost cadaveric or faecal, but I gave her small amounts of calomel, gr. $\frac{1}{20}$ to $\frac{1}{10}$, increased slowly to its toxic dose, and this odor gradually disappeared. She then began to eat

more food. We gave her prepared foods, but she says junket agrees with her best, and, with small quantities of pure grape juice and small doses of calomel, she is gradually getting better, and can now walk about again. Mercury will often salivate in these cases before you can secure its specific effect. Sometimes I find it advantageous to use chloride of gold. I also find that the iodides are of more use in women than they are in men. Her nose is depressed, and in fact is typical of syphilis. I think this is a case of congenital syphilis, and not acquired. At present she is taking syrup of hydriodic acid, which strengthens the digestion and also affords the action of the iodine. With this she is also taking some iron. In a few days we will begin with the calomel again.

Grape juice is a good article of diet, and as a nutrient it has about the same strength as milk. Skim milk, O iss, each day will sustain a patient's weight for months, and I think that a quart of grape juice each day will do about the same.

GASTRIC CATARRH.

This patient, Jas. H., age twenty-one, Irish, complains of having had palpitation of the heart for the last five or six years. He uses tobacco and alcohol to excess, has a cough, vomits in the morning, and has no appetite at any time. Alcohol causes a typical gastric catarrh with vomiting in the morning, and irritability of the heart. These patients complain of "heart-burn," and like their food highly seasoned. The walls of the stomach become so thickly coated with mucus, that the stomach does not secrete pepsin, and will not respond to the stimulus of the food in it. No wonder that there is trouble with the heart when it is stimulated by liquor. The patient's heart is excitable and not as strong as should be. If this man stops using tobacco and alcohol, he will feel badly for a time, but after that he will find that his dyspepsia will subside, the heart depression wear off, and he will completely recover; but, on the other hand, if he persists in the use of liquor and tobacco, he will not live to see his thirtieth year. During this time we must look after the catarrh. He should take a teacupful of boiling water, with a teaspoonful of carbonate of soda, one-half hour before each meal, to cleanse the mucus from the walls of the stomach. Then give him plenty of good nourishing food with pepsin, pancreatine and extract of malt. He must

strictly avoid all condiments, or bitters, of any kind, until every symptom of catarrh has disappeared.

TOBACCO HEART.

This man was here before with an irritable heart from the over-use of tobacco, and was given a preparation of coca to use in place of tobacco. Coca takes the place of food and removes the depression from the use of alcohol and tobacco. I have used it in hundreds of cases, and found it to act as an excellent substitute in many. His desire for tobacco is not quite as strong as it was, but his heart is irritable, irregular in its action, and not at all in a satisfactory condition. He must, therefore, have some heart tonic. When we speak of heart tonic, digitalis heads the list. We will give him tr. digitalism in. x., with a dessert spoonful of tr. cinchona comp., three times a day for one week.

ACID DYSPEPSIA.

This woman complains of vomiting bitter, sometimes sour, matter shortly after each meal. Before she vomits she has an excessive throbbing headache. The bowels are regular, and there is no bitter taste in the mouth, except when she vomits. There is a good appetite, and she drinks tea at the end of each meal. There is evidently decomposition of food and development of lactic acid, which constitutes the condition known as acid dyspepsia. Lactic acid will not be formed after hydrochloric acid is present in the stomach, and for that reason an effectual remedy here would be hydrochloric acid. Let her put of dilute hydrochloric acid gtt. xv in a wineglassful of water and take it at each meal, swallowing it by sips during the first fifteen minutes of the meal. Limit the food to those things that are not susceptible of the lactic acid fermentation. We will have her live on lean meat *exclusively* for a week, and eat no fat, bread, or pastries. She may have corn beef, mutton, boiled fish, soft boiled eggs, junket. She must not drink tea at meals, for the tannin in it precipitates the pepsin. It is well for her to drink cocoa boiled in milk. She must not use ice cream, ice water, and, in fact, as she herself says, "avoid everything that is good." — *Times and Register.*

An Analysis of Nine Cases of Penetrating Stab-Wounds of the Abdomen Treated by Laparotomy.

BY WALTER D. GREEN, M. D.

LAPAROTOMY for traumatism is daily becoming such an important factor and such a universally recognized method of procedure in modern surgical operations that it needs neither eulogy nor defense. The rule seems well established, that in cases in which penetration of the peritoneal cavity has occurred abdominal incision should be promptly done, and the viscera carefully examined. If the intestines or stomach be wounded, rectal injections of hydrogen usually demonstrate the existence of the lesion prior to operation; but that can not always be relied upon, unless used with great skill, for I have seen it fail from want of skillful manipulation, and that too in a case which, upon subsequent section, disclosed a large ragged wound extending directly through the stomach. Should hydrogen injections give assurance of no intestinal injury, an "exploratory" incision may be necessary to determine the existence of other visceral lesions or internal hemorrhage. By this means the latter can be checked, and foreign substances, as clothing and clots, washed out. Nor does this seriously complicate an already grave state.

The conditions existing in a case in which operation is necessitated as the result of traumatism are usually the most unfavorable, and exactly the contrary to those present when disease compels surgical interference. In a series of nine cases of penetrating stab-wounds of the abdomen treated in the Pennsylvania Hospital during a portion of my term as surgical resident, an analysis reveals the following conditions: Six of the patients were intoxicated upon admission. Seven received their wounds in fights, and five of this seven had various other injuries accompanying the stab. Three had more than one penetration, and eight had more or less visceral injury. Shock, generally profound, sometimes amounting to collapse, was present in all but one case, and was undoubtedly in a great measure due to internal hemorrhage in six patients at least. Death supervened in six cases from shock, exhaustion, or delirium tremens. Operation was promptly performed in all cases, four hours being

the longest time between the reception of the wound and operation.

The *modus operandi* adopted in the treatment was practically the same throughout. Intestinal wounds were sutured with fine silk or catgut. Hot distilled water irrigation, with glass-drains, was commonly employed. Peritoneum, muscles, and skin were included in each suture, and full antiseptic dressings finally applied. Drainage-tubes were kept clean by frequent emptying with a hard-rubber syringe and a stilette armed with absorbent cotton. Liquids were given sparingly by the mouth, stimulants being administered hypodermatically. Opium was but rarely used.

The large percentage of deaths was due, it seems to me, to several causes. Most of the patients admitted that they were steady, hard drinkers. Several were Italians, whose physical condition was by no means the best, nor were they, as a rule, able to bear with any degree of fortitude the pain necessarily entailed. All were in a condition of shock, from which some did not react before the time when it was deemed best to operate. In several great handling and exposure of the intestines were necessary, both to locate perforations and bleeding points. Ether nausea was common, and at times persistent. Tympany was usually an obstinate symptom. The complications were wounds of the bladder, the liver, the kidney and the lungs.

In a series of such severe cases we naturally expect a high mortality, but I can not conceive that *any* of the above could have recovered without operation, and do not believe the operation in itself contributed to the number of deaths.

—*Phil. Med. News.*

A Case of Drainage in Ascites.

BY R. J. HICKS, M.D., WARRENTON, VA.

ON the fifteenth day of April, 1886, I was called with Dr. Day, a promising young physician of my town, to see a man about thirty years old, whose occupation was that of a druggist. His habits had been intemperate. His liver was hard and enlarged. His abdomen was enormously distended with dropsical fluid. The whole list of so-called hepatics and diuretics had been tried. The one failed to reduce the liver; the other failed as signally to diminish the

dropsy. The hepatic obstruction to the portal circulation was the cause of the ascites.

I may remark, in passing, that I have more than once been disappointed in my efforts to reduce an enlarged liver by the use of mercurials and other remedies supposed to exercise a peculiar influence over the liver. I have been disappointed just as often in the use of diuretics. In fact, they may be put down as the most uncertain of our remedies.

The accumulation of water had now become so great as to obstruct the respiratory functions. The secretion of the kidneys was diminished, and the action of the heart was kept up with difficulty.

There was no difference of opinion as to what should be done. Drs. Day and Harris concurring in the opinion that mechanical relief was imperative, he was therefore tapped, and about a gallon of water was withdrawn.

Within three days the fluid had accumulated. Tapping was again resorted to; but each tapping caused an extraordinary shock to his nervous system. He was nearly overcome with fear at the mere suggestion of the operation. His pulse would become thready and great drops of sweat would roll down his forehead. It would take fully an hour for his mind to become sufficiently composed to allow this simple operation to be performed.

The trial was such that I made an effort to establish a fistulous opening through which the water might ooze out, but this would close within a few days.

Failing in this, and being satisfied that continuous tapping would overcome him, I determined to try the tolerance of a silver tube. Doctor Hodgkin, a dentist, very kindly and readily cut off about two and a half inches of the perforated end of a silver catheter, and a piece of silver about the size of a ten cent piece, about an inch from the open end, leaving about two inches of the perforated end for entrance into the abdominal cavity. On this was fastened a light, thin piece of cedar wood, to which straps were fastened, for buckling it around the waist as well as preventing it from slipping into the cavity. The open end of the tube was kept closed by a cork stopper to prevent the entrance of air into the cavity. Whenever it was desired to empty the abdominal cavity, the stopper was removed and a long tube substituted, through which the fluid was passed to a vessel at the side of the bed. This was generally done once daily.

This tube was kept in the opening, originally made by a trochar, from the middle of April to the latter part of October. During all this time the dropsical fluid was daily withdrawn.

In the meantime his digestion and nutrition were scrupulously cared for. Such diuretics as acetate of potash and extract of scoparious were given; fruit and vegetables were allowed; stimulants were given sparingly; pain and discomfort relieved and sleep promoted by hypodermics of morphia. Under this general course of treatment the water ceased to accumulate and the tube was removed in October.

A short while previous to this he was advised to consult an eminent physician in Baltimore, who prescribed chloride of gold. This was followed by a violent gastritis, whether as a cause or a coincidence I do not know. This gradually yielded to morphia and nitrate of silver. For some time subsequently he suffered from rheumatism, for which he was treated with phosphate soda and tonics; and under this he slowly but steadily improved. He now (September, 1889) seems as well as he ever was.

Nature and Limitation of Operative Treatment for Uterine Fibroids.

BY DR. PAUL F. MUNDE, NEW YORK.

Bost. Med. and Surg. Jour. (Trans. Am. Gyn. Soc.) :— There was a tendency among the profession at large to look upon all uterine fibroids as requiring some kind of treatment, and the laity in general believed that any tumor was likely to kill, so that there was often difficulty in convincing the patient that her fibroid was comparatively harmless. He questions whether the pathological importance and injurious influence of these tumors warranted the extravagant enthusiasm accorded to their conservative treatment by galvanism. While not wishing to detract from the credit due the originator of the method, he thought the relative value of the treatment exaggerated and its indications extended beyond absolute necessity. He mentioned several cases where heroic operations had been done for innocuous fibroids.

His own observations during the last three years included 2,974 cases of pelvic disease. Of these, one hundred and twenty-three were instances of uterine fibroid; sixty-one of

these gave so little trouble that not even medical treatment was thought necessary. In the sixty-two remaining cases the treatment called for depended upon the location of the tumor and the symptoms produced. Subperitoneal tumors seldom call for treatment, except for pressure symptoms. Insterstitial or submucous for pressure or menorrhagia. Cervical for interference with defecation, micturition, parturition, coition or for the bloody discharge to which they may give rise. The author warns against the premature operative removal of sessile fibroids per vaginam, when a few months' oxytocic treatment will often render them easily accessible through the dilated cervix. From a study of the treatment adopted in the sixty-two cases mentioned, he reaches the following conclusions:

(1). Fibroid growths of the uterus situated near the fundus uteri and showing no tendency to downward development, if requiring active treatment, are best reached from the abdominal cavity.

(2). Tumors situated near the internal os and under the influence of oxytocic measures, or of their own accord showing an inclination to dilate that orifice and encroach upon the cervical canal, can almost always, after due preparation, be removed safely per vaginam.

(3). About one-half of all fibroid tumors, which come under the observation of the physician, require no active treatment of any kind.

(4). Only rapidly growing subperitoneal or interstitial tumors call for or are benefited by galvanic treatment.

(5). The removal by the sharp curette of the hypertrophied mucous membrane of the uterine cavity will often, at least temporarily, relieve the menorrhagia, which is the chief symptom caused by the interstitial variety.

(6). Enucleation, after splitting the capsule by means of traction by the finger and some blunt instrument, offers a safe means of cure in cases of interstitial, cervical and submucous corporeal tumors. Certain interstitial tumors, which are so situated as not to be affected by the pressing influence of ergot, and influencing the general health by profuse uncontrollable hemorrhages, and certain cases of rapidly growing subperitoneal tumors, in which a thin pedicle can not readily be formed, may require the removal of the ovaries to check the hemorrhage and the growth of the tumor.

(7). Laparo-hysterectomy should never be performed merely to relieve the patient of a fibroid tumor, which does

not affect her general health and is merely inconvenient or unsightly.

(8). The nearer the menopause the less likely is the fibroid to grow or cause trouble, and, therefore, other things being equal, less likely to call for active operative measures.

The Treatment of Hernia in Children.

BY A. JACOBI, M.D., NEW YORK.

Archiv. Pediat., October:—Umbilical hernia is of very frequent occurrence, but seldom attended with danger. Incarceration takes place very rarely; still, Treves and others have reported successful operations for such accidents. As there is a predisposition to the development of this variety of hernia, so there is a tendency toward spontaneous recovery. The round umbilical aperture will normally change after a number of months, or even a year, into a narrow fissure, more fat will develop, the muscles will become stronger, and then the intestine will be retained within the abdominal cavity. To accomplish this still more certainly, it is desirable to retain the contents of the hernia sac inside the abdomen. For this purpose, trusses are very unavailing. Strips of adhesive plaster will serve very much better, but in most cases they are objectionable because they irritate the sensitive skin of the baby.

Whatever application is made to the hernia directly must be larger than the aperture. It should not be too hard. Linen compresses, and those of woven lint, plates of cork covered with linen or lint, may be applied and held in position by means of a bandage. Knitted bandages will suit better than the ordinary bandage of linen, cotton, or flannel.

Inguinal hernia in the newly-born or the very young is apt to recover spontaneously. When the short and straight inguinal canal becomes longer and more oblique, in the course of a few years, and the amount of fat goes on increasing, the rupture may disappear; but all these predisposing factors never succeeded in effecting a cure by themselves. This was accomplished only when the hernia was retained inside the abdominal cavity completely and constantly, by means of a truss, which must be worn for years. It must not be removed except when the baby is sleeping quietly.

Trusses are uncomfortable in the beginning, and give rise to cutaneous irritation, particularly under the influence of urine. So much the more is it necessary to keep the truss clean, and always to select one which fits exactly without exerting too much pressure.

Hernia is easily reduced into the abdominal cavity. But there are on record quite a number of cases in which incarceration and strangulation required operative interference. The operation should not be delayed after reduction proved impossible, even under the influence of an anæsthetic. An instance of a successful operation on a case of strangulated femoral hernia, which occurred in a girl of eleven years, has been reported by St. Germain. Rees succeeded in reducing an inguinal hernia by aspirating from the intestine a quantity of turbid liquid. An exceptional case of the kind, however, must not be recommended for general adoption.

The Treatment of Influenza.

BY PROF. ROBERTS BARTHOLOW, M.D., LL.D., OF PHILADELPHIA.

THOUGH having had no personal experience, the general principles are such as to permit an authoritative expression. When the great epidemic of 1845-46 prevailed, President Tyler's personal experience was so unhappy that the popular name of "Tyler's grip" was given to that epidemic.

Persons suffering from catarrhal affection of the naso-pulmonary mucous membrane should adopt the most effective means to keep in good condition—for the impressionability is increased by anything that lowers the vital tone. Are there not microbes that may be used to lessen this susceptibility and any special readiness to receive a new morbid process to be engrafted on the old? It seems to me that the best manner of securing immunity is by the inhalation of sulphurous acid gas daily when the approach of the epidemic renders it necessary, and by taking five grains of salicylate of cinchonidine three times a day, and by so living as to avoid taking cold.

When the attack has begun, it seems to me desirable to give one or two grains of calomel at night, inhale some sulphurous acid gas, and have the patient sit in a room where steam containing eucalyptol can be inhaled in large quantity.

Local applications are useful as furnished in gases, in vapors and in powdered solids by the method known as insufflation.

Of the gases, sulphurous acid is one of the more efficient against such troubles as tuberculosis, where a conclusion is reached by test of cultures. To give this, burn some sulphur in an apartment. The amount of the gas to be inhaled depends on the person and his condition. To determine these points, trials are necessary. Ordinarily, some constriction of the throat and a pronounced metallic taste—"brassy"—indicate the limit. The frequency may be twice or thrice a day. Peroxide of hydrogen, oxygen or ozone will no doubt act as well in suitable cases.

The best vapor to use during the preliminary dry stage is steam, and the patient may inhale constantly by filling the air of the apartment. With steam may be included the vapors of creasote and oil to eucalyptus, or turpentine. A simple method of using these remedies is to put into some water a sufficient quantity of eucalyptus leaves, and add from time to time creasote or turpentine, or both. The water in the vessel containing these medicaments is made to simmer all the time. The heat may be obtained from a gas stove, a gas-burner, or the common stove. The amount to be disengaged may here be ascertained by noting the effects on the local trouble.

Of the vapors, those most useful are ethyliodide, creasote, turpentine, iodine, carbolic acid, iodine with creasote or carbolic acid, etc. These are most useful in the stage when the dryness of the mucous membrane is becoming moist and relaxed.

By insufflation—that is, by projecting fine powders by blowing on the affected parts. An insufflator is an easy method for applying the powder; it has a cavity reservoir, a tube straight or curved, and an air-bag for forcing the air through.

Of the powders, those most useful are iodoform, salicylate of bismuth, tannin, iodo-tannin, and especially resorcin. The last mentioned will be found to have an excellent effect, by dusting over the whole area as far as practicable.

The internal remedies that will do most good are, first, atropine in solution—gr. $\frac{1}{2}$ to $\frac{3}{4}$ of water—each minim containing $\frac{1}{430}$ to $\frac{1}{460}$ grain, and the dose will be from one to five minims, the minimum being for little children (after first dentition). The tincture of belladonna may be used—

from one to ten drops twice a day. As this medicament is both prompt and prolonged in action, it should be given not more than twice a day, unless the dose be much smaller than is advised above. Salicylate of cinchonidine and quinine should be given as a prophylactic remedy, if there be reasons to suppose that such power is really exerted by it. My own conviction is that as a prophylactic the combination of cinchonidine with salicylic acid is preferable to quinine. For the depression and melancholy it is probable that atropine will do better. For the distressing headache, joint pains and wakefulness, antipyrin, acetanilid, phenacetin, and other germicides and antisepsics, will, no doubt, be found useful.—*College and Clinical Record.*

An Experience With the Influenza.

BY RAMON GUITERAS, M.D.,

Physician to the New York Dispensary.

As one of the physicians of the New York Dispensary, and having in that capacity seen a large number of cases of influenza, it has occurred to me that a short account of my experience with the disease might be interesting to the readers of the *New York Medical Record*. The institution to which I refer has exceptional opportunities for the study of all diseases on a large scale, situated as it is in a very populous district, which is largely inhabited by the laboring and pauper classes.

The course of the epidemic at this dispensary has been a very interesting one to study. My class is one of unclassified Italians, which averages generally about thirty daily, ten new and twenty old patients. Since the "grip" has introduced itself, the number has increased to between sixty and seventy daily. Of these, almost forty cases are new patients, of whom fifty per cent. are suffering from *la grippe*, and twenty per cent. of the old cases are suffering from the same trouble. I have had, since Christmas alone, to December 30th, one hundred cases of the disease occurring in men, women and children, ranging from two to fifty years of age, although probably ninety per cent. of them have been between the ages of twenty to forty. Of these cases, eighty-five per cent. have been males, principally strong and robust Italian laborers, who have been obliged

to put up the shovel and the pick and succumb to the popular malady. These all complain of the same symptoms, chilly sensations or chills, followed by high fever, loss of appetite, general prostration, feeling of weakness, especially in legs, strong frontal headache, general rheumatic pains, but especially in the chest and back, foul and coated tongue, bad taste in the mouth, constipation, etc., perhaps nasal catarrh, but at all events winding up in almost every case in a dry bronchitis, lasting from two days to two weeks, the feeling of weakness and sweating on slight exertion occurring during this same period.

In reviewing these cases and considering them collectively, I find that only about ten per cent of the cases have had any nasal catarrh to speak of. That about two per cent. have suffered from an intestinal form of the disease, having the same general symptoms as the others, with the exception that the catarrhal symptoms of stomach and intestines have been most marked, and have shown themselves in vomiting and diarrhea; severe frontal headaches seem to occur in all cases. Pains, variously described as in bones and muscular (probably muscular in most cases), were complained of in about forty per cent of the cases, although I think that they all suffered from them in a more or less marked degree. Pains in orbits and eyeballs, spoken of by many as characteristic, were only marked in about ten per cent of the cases coming under my observation.

The epidemic, which had been threatening, so to speak, for two weeks past, was finally showered down upon us as a Christmas gift, is at present date at its height, and will continue in all probability for another week and will then begin to decline, so that one month hence the "grip" will be a thing of the past.

The experience in the rooms of the dispensary is the same; Dr. Cutler's class in general medicine being very large, about seventy-five cases a day, fifty new and twenty-five old. Of these, about sixty-five per cent of the new cases and twenty-five per cent of the old ones are suffering from the disease. Dr. Hance's experience in the same class is about the same as Dr. Cutler's. The district work, for which two physicians are employed, is heavier than ever before, averaging about as many daily as it formerly did weekly, so that the force has been increased. This is all due to the epidemic, fifty per cent of the cases being those of influenza; so that over a hundred cases daily are treated

at the dispensary. In all these cases recovery took place, and, as far as I can ascertain, there were no complications. The treatment instituted may be summed up as follows:

If the attack occurs in the morning, a mild cathartic is administered, generally calomel, in two to ten-grain doses. This is followed at night by a ten-grain Dover's powder and ten grains of quinine. On the following day, when the catarrhal symptoms become marked, a pill of morphine (gr. $\frac{1}{10}$), ext. bellad. (gr. $\frac{1}{5}$), camph. (gr. $\frac{1}{2}$), and quin. (two to three grs.), is given every three or four hours.

When the bronchitis is the prominent feature, a mild expectorant mixture is given, containing syr. licorice, squills, senega, chloride of ammonia, morphine, etc. For frontal headache antipyrin, ten to fifteen grains, with whisky, is administered.—*New York Medical Record.*

Hæmoptysis of Elderly Persons.

BY SIR ANDREW CLARK, BART., M.D.

THERE occurs in elderly persons, free from ordinary diseases of the heart and lungs, a form of hæmoptysis arising out of minute structural alterations in the terminal blood-vessels of the lung.

These vascular alterations occur in persons of the arthritic diathesis, resemble the vascular alterations found in osteoarthritic articulations, and are themselves of an arthritic nature.

Although sometimes leading to a fatal issue, this variety of hæmoptysis usually subsides without the supervention of any coarse anatomical lesion of either the heart or the lungs.

When present this variety of hemorrhage is aggravated or maintained by the frequent administration of large doses of strong astringents, and by an unrestricted indulgence in liquids to allay the thirst which the astringents create.

The treatment which appears at present to be the most successful in this variety of hæmoptysis consists of diet and quiet, in the restricted use of liquids and the stilling of cough; in calomel and salines, in the use of alkalies, with iodide of potassium, and in frequently renewed counter-irritation.

Concealed Pregnancy—Its Relations to Abdominal Surgery

DR. A. VANDERVEER (*Jour. Amer. Med. Association*) concludes an elaborate study thus:

1. Finally, from the study of seventy cases, I am convinced that errors of diagnosis are dependent, in a large proportion of the cases, upon conditions which make it absolutely impossible, when these conditions recur in other cases, to avoid the same diagnostic conclusions.

2. That it is the duty of every operator, before making an abdominal incision, to secure personally, or by a specially qualified assistant, a fully classified, written statement of the facts which go to make up the clinical history of the case, together with the results of the physical exploration made by the operator and his consultants, using a formal blank statement (that of Sir Spencer Wells, for example), so that no facts may be omitted. That no part of this duty should be delegated, except under supervision, to internes of hospitals.

3. That the probable diagnosis should be based upon the physical signs contained in the notes, corroborated, with few exceptions (unmarried and ignorant patients), by the rational signs contained in the clinical history, and not by the simple abdominal palpation and "the dim light of pelvic examination."

4. That whenever the slightest probability of pregnancy exists, it should be fully explained to the patient and her friends.

5. That the necessity for operative relief and the consequences of delay or neglect should be carefully stated to the parties interested before obtaining their formal consent to the operation.

6. That it is the duty of every operator to report fully all such cases, that the methods of diagnosis may be improved, if possible.

7. That it is the duty of the profession at large to maintain that pregnancy may be absolutely concealed, especially prior to the fourth or fifth month, by other intra-abdominal conditions.—*American Lancet*.

Migraine, its Pathology and Treatment.

ACCORDING to Anstie, migraine (hemicrania) is a variety of neuralgia of the ophthalmic division of the fifth nerve. He remarks that the attacks of migraine often interchange with neuralgia seizures; that they often begin with pain distinctly located in the supraorbital nerve, as the result of exposure to cold or other of the causes of ordinary neuralgia. This view is favored by Senkler in "Pepper's System of Medicine."

Romberg regarded migraine as a neuralgia of the cerebrum, but Hesse observes that the symptoms of this neurosis are equally compatible with its location in the branches of the fifth distributed to the meninges and bones of the cranium.

There is, however, much to be said in defense of the view that migraine is primarily a neurosis of the sympathetic nerve. According to Du Bois-Reymond, the phenomena of migraine are best explained by the supposition that there is abnormal excitation of the sympathetic on the affected side, and he emphasizes in this connection the retraction of the temporal artery, the pallor of the countenance, the dilatation of the pupil; all of which are due to tonic contraction of the vascular and oculo-pupillary muscles.

But, as Jaccoud remarks, the constancy of the phenomena has not been established, and Moellendorff afterward maintained a directly contrary view, to wit: that the symptoms of hemicrania depend on a unilateral relaxation of the vessels of the head, from want of energy of the vaso-motor nerves. Eulenburg adopts an intermediate theory, affirming that a certain class of cases is undoubtedly vaso-motor in its origin. He describes two types of migraine; the sympathetico-tonic or angio-spastic, and the angio-paralytic or neuro-paralytic forms. In the one, the face is pale and sunken; in the other, it is hot, turgid, and flushed during the height of the attack. In the one, the pupil is dilated and the temporal artery appears as a hard cord; in the other, the pupil is contracted, and the temporal artery is swollen and throbs with increased force. In the one, the eyes are pale and sunken; in the other, they are suffused and prominent.

Jaccoud reconciles the pathological difference above mentioned by assuming that there can not be two vascular conditions so contradictory, as the substratum of migraine. If, he says, clinicians have witnessed opposite phenomena,

it is simply because they observed at different periods ; in other words, the paroxysm of migraine is constituted by an abnormal excitation of the sympathetic followed by a paralysis by exhaustion, which marks the decline and the termination of the paroxysm. The contraction of the vessels during the onset and the active period of the attack explains why the pain is exaggerated at each pulsation of the artery ; as for the origin of this pain, it may be attributed to the vascular cramp itself, which compresses the nerve filaments contained in the unstripped muscles.

Hemicrania is a disease from which no station or condition of life is exempt. Rich and poor, the man of ease and the fashionable lady, the mill operative and the kitchen drudge are alike subject to migraine. Among the factors in its production, hereditary predisposition in the most potent. The disease follows the female line, being usually inherited from the mother only, (Eulenburg). When there is a strong hereditary tendency, girls of quite a young age may be attacked by migraine. Eulenburg has known girls of four and five years to be sufferers.

In half the women affected with migraine, the attacks occur at the menstrual period or immediately after. In other cases the attacks are due to mental excitement, after attendance at a party, at a theatre, etc. Sometimes the attack is provoked by reading and study ; some persons have hemicrania from reading by artificial light. The attacks sometimes appear to originate in digestion.

It is in this form of neuralgia that the recently discovered analgesics, antipyrin, acetanilide, phenacetin, exalgine, seem to do the most good. Here the triumph of guarana and caffeine is sometimes seen. When the attack can be traced to the stomach, ipecacuanha in one-fourth grain doses every hour has been commended, also rhubarb and soda, or some of the effervescing aperients.

In the angio-spastic variety, nitrite of amyl inhalations, and nitro-glycerine by mouth, have been beneficial. In the angio-paralytic form, ergot has been found useful.

Senkler speaks favorably of bromide of lithium, fifteen grains every hour for two or three doses. The effervescent bromide of caffeine, or bromo-pyrine, is a good preparation. Seguin speaks enthusiastically of cannabis indica, one-fourth grain doses of the alcoholic extract three times a day, to be continued for weeks and even months. Aconitia (one two-hundredth grain) and gelsemium have been praised ; the

former is perhaps one of the most certain remedies in angio-spastic variety. Malarious forms are speedily benefited by large doses of quinine. Always, as prophylactic treatment, arsenic and cod-liver oil are indicated.

Anstie and Eulenburg think well of galvanism to the head and sympathetic. Firm pressure on the head and compression of the carotids sometimes give relief; the same may be said of sinapisms to the nape of the neck and the application of a hot water bag to the back of the head.

After all, resort must sometimes be had to hypodermics of morphia in the atrocious suffering of migraine.—*Bost. Med. and Surg. Jour.*

Microscopy.

San Francisco Microscopical Society.

Meeting of December, 1889, Reported for MEDICAL NEWS by C. P. Bates,
Recording Secretary.

A LARGE and appreciative audience assembled last evening in the rooms of the San Francisco Microscopical Society, in response to invitations issued for an informal reception to friends of the members.

Four large tables occupied the available floor space, each presided over by one of the members, who followed the programme of exhibiting and elucidating as many objects as could be shown during twenty minutes, when each exhibitor transferred his microscope and accessories to the adjoining table for a like space of time, and so on, till each, in turn, had occupied all the tables, thus giving the visitors the benefit of the entire range of subjects presented, without the confusion and delay consequent on all having to change places.

The objects shown were selected with a view to be interesting and instructive, but it would be impossible to give a detailed account, in a short report, of the many beautiful forms shown during the evening; a brief summary is all that is attempted.

A. H. Breckenfeld handled two binocular instruments, showing a series of objects with polarized light through one, and another set of mounts by transmitted and reflected light with the other. Among the polarizing subjects were

brucine crystals, kinate of quinia, young oysters (rolling in fluid), toe of white mouse and *formica rufa* (the wood ant); by transmitted light, Rinnbock's geometrically arranged diatoms, duodenum of rabbit and head of crane fly; by reflected light, hairs of sea mouse, peristomes of mosses and feathers of humming-bird. All of these, and many others, were shown by this gentleman in his scientific manner, and explanations given of their different characteristics.

C. C. Riedy exhibited a large number of beautifully prepared slides, consisting of diatoms, prepared and in situ mounts of Foraminifera graphically shown, with dark ground illumination, produced in an original manner by this gentleman by means of the water-immersion system, in connection with the Abbe condenser.

He also displayed some ably prepared slides of insects by famous mounters, well illustrating the structural anatomy of this order.

One of the interesting features of the evening was the array presided over by E. J. Wickson, upon whom devolved the pleasing duty of showing and explaining in his popular manner the different forms and varieties of parasitic and insect eggs, some of them a marvel of intricate structure and ingenious adaptation of means to ends, as manifested by nature in caring for the preservation of even the smallest members of her vast kingdom.

There were eggs round, disc-shaped and of octagon form, others flattened and provided with a trap-door by which the newly hatched organism could make its debut into the world, without the necessity of cutting through a tough but transparent membrane that frequently presented all the colors of the rainbow.

The human skin and the structures adjacent and connected with it were ably elucidated by one of the evening's exhibitors, while the slides prepared by him and beautifully stained proved the truth of the saying that "seeing is believing." One of the series illustrated the perspiration glands, together with the different layers of the skin through which they pass before emerging on the surface of the body; also, the subjacent areolar tissue and its connection with the glands.

A stained and mounted section of the human hair, also shown in this series, gave many of the visitors quite a different idea from what they previously held regarding the hirsute provision supplied to us by nature. The hair follicle,

the pigment cells, the different layers of membrane surrounding the hair itself, and the hollow central tube that conveys the oil to the surface and keeps the hair smooth and glossy, were all vividly displayed, and caused many expressions of wonder at the intricate structure of even so common a thing as the hair.

In this entertaining manner all present passed a very enjoyable evening, and it was not till a late hour that the invited guests departed, and the first of what is proposed to be a series of these receptions was brought to a successful close.

Gleanings.

A NEW DUSTING POWDER.—Dr. Kiezer publishers an interesting paper on the use of salol as a dusting powder. He applied it in the following combination:

Salol	5 <i>j.</i>
Amylum powder,	5 <i>j.</i>

A varicose ulcer, in which all kinds of treatment had invariably been tried, was nearly cicatrized six weeks after the first application of salol. Six other cases of ulcerated leg were treated with the salol dusting powder; in all of them except one the success was equally marked as in the first case. Excellent services were also rendered by the dusting powder in cases of sycosis, burns, scalds, wounds, defects of the skin, etc.—*Prov. Med. Jour.*—J. A. M. A.

TREATMENT OF IODISM.—The origin and treatment of iodism is the subject of an essay by Roehmann and Malachowski, who regard the manifestations of intense irritation of the mucous membrane, which so frequently follow the administration of small as well as large doses of iodine, due to free iodine in the system. It is necessary for this development that nitrites should circulate in the organism and that the reaction of the respective mucous membrane should not be alkaline. Hence, the authors attempt, by administering 150 to 180 grs. bicarbonate of soda in two doses daily, to render the mucous membrane alkaline. By treatment, pursued since 1887, they have succeeded not only in ameliorating the most intense iodic irritations, but in removing the milder ones entirely.—*Therap. Monatsh.*, 1889.

NEW TREATMENT FOR GONORRHŒAL ORCHITIS.—In 1888, Dr. Dormand advocated the administration of tincture of anemone pulsatilla in orchitis, claiming that it would cure cases that had withstood other treatments for various lengths of time. Lately, in *l'Union Medicale*, Du Castel has again called attention to the prompt relief afforded by this medicament. He prescribes it in the form of a syrup, giving a drop every two hours.

VERTIGO FROM CONSTIPATION.—Persons who are accustomed to have a regular action of the bowels every morning are usually affected with dizziness or vertigo, or with a sense of faintness, if the natural habit be by any accident omitted. The reason is a very simple one, and is purely mechanical. The regular habit causes the rectum to be loaded with feces, and when the rectum is loaded there is pressure on the surrounding veins. But, as I have shown by direct experiment, the cerebro-spinal fluid finds its way into the venous circulation by the inferior vena cava and the common iliac veins.

When, therefore, there is pressure, causing impediment to the venous circulation in the pelvis, there is at once an interference with the process of escape of the cerebro-spinal fluid, and pressure upon the whole of the cord, up to the cerebrum itself.

The form of constipation here referred to is in the rectum, and must not be confounded with constipation due to accumulation or inaction in the colon. Vertigo with constipation, and with the patient connecting the uneasy cerebral symptoms with the constipation, is an indication that that rectum is loaded, and that relief will follow from a brisk aleotic purge.—B. W. Richardson, M. D., in *Col. and Clin. Record*.

CHILBLAINS.—An interesting correspondence has recently taken place in the *British Medical Journal* regarding the treatment of chilblains. One correspondent says that the socks or stockings should be of wool and not too thick. They should be thoroughly dry when put on, and changed as soon as they become damp, either from perspiration or moisture leaking through the shoes. For this reason the socks should be changed immediately after taking exercise, and the same shoes or boots should not be put on again unless they are quite dry. The same pair of socks should not be worn for two consecutive days, but each pair should be washed, or at

least thoroughly dried, before being worn a second time. On no account are the socks to be allowed to dry on the feet, and the practice of putting the feet before the fire is to be condemned. Chilblains are more prevalent when the weather is both cold and damp. It is important to insist upon regular exercise and a moderate diet, and to sedulously prevent constipation. For the immediate relief of itching nothing is better than soaking in hot water. Iodine is the best external application. It should be applied—either as an ointment or tincture of twice the ordinary strength—once or twice daily, as long as the skin remains swollen or red.

Dr. Robert McBride thinks the following is the most efficacious:

R	Lin belladonnæ (br. ph.),	52
	Lin. aconiti (br. ph.),	51
	Acid. carbol.,	m6
	Collodii flex.,	ad 51

M. To be applied with a camel's hair pencil every night to the parts affected.

Dr. G. E. J. Greene has found the following application a useful one, even when the chilblains are broken:

R	Olei ricini,	
	Olei terebinth,	
	Collodii flex.,	aa 34

M. To be used twice or thrice daily.

Dr. B. Nichols speaks very highly of the following:

R	Spir. camphor,	52
	Tr. opii,	52
	Acid carbol.,	gr. 40
	Alcohol,	54
	Aquaæ,	54

If the skin is broken, this lotion may be diluted with water and applied on lint or with a soft rag.

Another writer states that, if the chilblains are painted with equal parts of compound tincture of iodine and collodion, three or four times, considerable benefit will follow. He has never known this treatment to fail since he first tried it some ten years since.—*Can. Med. Rec.*

TREATMENT OF LOCOMOTOR ATAXIA.—Benedikt reports a case of locomotor ataxia which, when admitted to his services, presented a marked degree of amblyopia and amaurosis, together with such a degree of ataxia that the patient could not stand, even with the assistance of two persons. After vari-

ous attempts with hydropathic and electrical treatment, Benedikt stretched both sciatic nerves, and the patient was soon able to walk alone, with the aid of a cane. The case confirms a law formulated by Benedikt twenty-five years ago, to the effect that cases of tabes with prodromic atrophy of the optic nerve have a favorable prognosis as regards the ataxia. Benedikt also reports a case of locomotor ataxia treatment by suspension. The patient has submitted to forty suspensions of two minutes each. Pain has almost disappeared, and the ataxia is greatly improved, the patient being able to stand erect even with his eyes closed. In this case, as in all cases of syphilitic origin, the ataxia is atypical. Benedikt maintains that the majority of patients afflicted with locomotor ataxia and progressive general paralysis have never been the subjects of syphilis.—*La. Sem. Med.*

HOW "FAITH CURE" MAY SPREAD DISEASE.—Certain ignorant Scandinavians in Brooklyn and vicinity have adopted, in a very fatalistic way, a doctrine of healing by faith and prayer. They do not believe in medicine or physicians, and they will not call in the aid of the latter, except in cases where death is impending. One of them said recently: "I want a physician to come and see my child in order to comply with the law, which says that a physician should see the case within twenty-four hours before death; the law gives me a certificate of death if I do this." The women who have adopted this strange fanaticism have united themselves into an order which they call the "Lodge of Faith," which nurses the sick free of charge and adjures the employment of any medicines. It is believed that these nursing sisters have been the means of spreading scarlet fever and diphtheria, going as they do, with a perfect abandon and disregard of earthly consequences, from one house to another.—*N. Y. Medical Journal.*

HEREDITY OF INFECTIVE DISEASES.—The question whether pathogenous bacteria pass over from the mother to the fetus, has long been the subject of scientific investigation. For this anthrax has offered the most attractive field. It has again lately gone under review by Prof. Max Wolff (*the Medical Press*). In 1858 Brand inoculated pregnant sheep; the mother died, but the progeny escaped. In 1869 Davaine, and in 1876 Bollinger, obtained like results. Since then Strauss and Chamberland, who have worked in a different way, have obtained different results. Wolff's

inquiry was made with a view of clearing up the doubt that has been raised by the experiments of the two previous investigators. His inquiry consisted in infecting some pregnant guinea-pigs, and later on examining the organs of the progeny after the mothers had succumbed to the disease. In every instance the results were completely negative as regarded microscopic examination; 150 cultivations were then made from the 29 fetuses, and of these 144 showed no development of bacilli. Finally, 29 control animals were inoculated from the 29 fetuses, of which 26 escaped, and 3 were attacked by the disease and died. Particular attention was paid to the presence or absence of the bacilli in the placenta and membranes, with the result that, although they were found to be abundant in the maternal placenta, they were not once observed in the chorionic fringes.—*Medical Record.*

ACETANILIDE AND TONSILLITIS.—Dr. Sahli has found, both from personal experience and from numerous observations on patients, that moderate doses of acetanilid will almost invariably give great ease in cases of acute tonsillitis, thus allaying the distress of the patient and enabling him to swallow food, stimulants or medicine. The dose he employs is seven and a half grains, which he usually orders in a mixture with spirit and syrup, which must be shaken up before being taken. This is sufficiently agreeable to be taken readily even by children. Dr. Sahli mentions that he has found great benefit from this treatment in scarlatinal sore throat.—*Medical Record.*

COCAINE HALLUCINATIONS.—MM. Magnan and Saury report three cases of hallucination due to the cocaine habit. One patient was always scraping his tongue, and thought he was extracting from it little black worms; another made his skin raw in the endeavor to draw out cholera microbes; and a third, a physician, is perpetually looking for cocaine crystals under his skin. Two patients suffered from epileptic attacks, and a third one from cramps. It is important to notice that two of these patients were persons who had resorted to cocaine in the hope of being able to cure themselves thereby of the morphine habit, an expectation which had been disappointed. For more than a year they had daily injected from one to two grammes of cocaine under the skin, without, however, giving up the morphine injections, which were only reduced in quantity. The possibility of

substituting cocaineism in the endeavor to cure morphinomania is a danger, therefore, which must be carefully held in view.—*British Medical Journal*.

CHOREA.—Prof. H. C. Wood says that antipyrin is a more successful remedy than arsenic. With the latter the average duration of treatment is sixty to ninety days. With antipyrin he has succeeded in completely arresting convulsive movements within one week. And so it goes on; the list of diseases which beneficent antipyrin can conquer appears to be almost endless. Before long it may be possible to save time by making a list of the things which it can not, rather than of those which it can benefit.—*Med. Review*.

TREATMENT OF ENURESIS WITH ANTIPYRIN.—MM. Perret and Dervie, believing that enuresis is due to a spasm of the sphincter of the bladder, treated two cases of nocturnal incontinence of urine with antipyrin in doses of from two to three grammes a day. The trouble ceased ten days after the beginning of the treatment, and even after the withdrawal of the antipyrin the enuresis did not return.—*Revue de Therapeutique*.

Book Notices

THE NATIONAL MEDICAL DICTIONARY: Including English, French, German, Italian, and Latin Technical Terms Used in Medicine and the Collateral Sciences, and a Series of Tables of Useful Data. By John S. Billings, A.M., M.D., LL.D. Edinburgh and Harvard, D. C. L. Oxon., Member of the National Academy of Sciences; Surgeon U. S. A., etc. With the Collaboration of W. O. Water, M.D., Frank Baker, M.D., S. M. Burnett, M.D., W. T. Councilman, M.D., James M. Flint, M.D., J. A. Kidder, M.D., William Lee, M.D., R. Lorini, M.D., Washington Matthews, M.D., C. S. Minot, M.D., H. C. Yarrow, M.D. In Two Volumes. Volume I.—A to J. Volume II.—L to Z. Large 8vo. Pp. 1,500. Double Column Pages. Leather. Philadelphia: Lea Brothers & Co. Sold by subscription.

No one who sees this magnificent work—the National Medical Dictionary—will charge us with exaggeration in asserting that it is superior to any work of the kind ever

published either in the English or any other language. In scope, thoroughness and scientific accuracy it has no equal. In derivation of words and terms and definition it is accurate and exhaustive—the definitions being scientifically complete, and seldom requiring circumlocution in their expression. Every physician of learning, with whom the English language is vernacular, will consider his medical library incomplete until he secures a copy of this work.

The object of this Dictionary, as set forth in the preface, is to furnish to students and practitioners of medicine a clear, concise definition of every medical term in current use in English, French, German and Italian medical literature, including the Latin terminology of these languages. For all the most important words in English and Latin the synonyms in French, German and Italian are given when these differ from the prime word. For English and Latin terms the pronunciation is indicated by an accented syllable, and for those English words thought to require it, by a simple system of phonetic spelling. For most English and anglicized Latin words, with the exception of names of drugs and plants, the derivation is given.

In the way of showing the great scope of the work, we will mention the fact that the total number of words and phrases defined is 84,844, of which 25,496 are Latin, 9,158 are French, 16,708 German, and 6,514 Italian. This does not include French, German and Italian synonyms given only in connection with English or Latin primes.

The collaborators named on the title-page assisted the author, Dr. J. S. Billings, as follows: Dr. Frank Baker furnished terms relating to anatomy; Dr. S. M. Burnett, terms relating to ophthalmology and otology; Dr. W. T. Councilman, terms relating to pathology and nomenclature of disease; Dr. J. M. Flint, terms relating to *materia medica*; Dr. C. S. Minot, terms relating to embryology, etc.

Prefixed to the first volume are a series of tables which will be considered very useful. Much of the information contained in them can only be found in large libraries. They include a table of doses; of antidotes in the most common forms of poisoning; of the inch and metre system of numbering spectacle glasses; of thermometric scales; of the average dimensions of the fetus at different ages; the average dimensions of the parts and organs of the adult human body and of the weights of organs of the human body, which will be found useful for reference in making post-mortem

examinations when these involve questions of medical jurisprudence.

The publishers of this splendid work deserve great credit for the superior style in which they have issued it. The type is large and unusually distinct; the paper is of the best quality; the binding is substantial, and gives the volumes a beautiful appearance.

Tracheotomy in Opium Poisoning.

BY G. P. HACHENBERG, M.D., AUSTIN, TEXAS.

Communicated to the CINCINNATI MEDICAL NEWS.

TRACHEOTOMY has been performed within the last few years by several surgeons for opium poisoning, and I draw the inference from their reports that priority in the operation for extreme poisoning was claimed by some of them.

I am under the impression that I first performed this operation for the purpose specified. It was under extraordinary circumstances, on a soldier in the U. S. Hospital No. I, Nashville, Tenn., in 1864. I found the patient in an extreme comatose, asphyxic condition, with no history on hand to account for it. The ward-master told me that he was convalescent from a disease, and that he had not recently taken any medicine whatever. As the respiration indicated a laryngeal paralytic condition, and the patient was apparently in the throes of death, I hastily performed tracheotomy, which was followed by artificial respiration, which soon restored consciousness, and the patient rallied and completely recovered.

After the operation I made a more careful examination of the patient, in particular of the eyes, and the contracted condition of the pupils led me to suspect opium poisoning. It was so, as we afterward ascertained.

After the close of the war, from an order of the Surgeon General for surgical reports of interest as contributions for the Medical and Surgical History of the War of the Rebellion, I forwarded a number. Of these, two were omitted in the publication, the case referred to above being one of them. The omission was probably on account of their unusual character, but, for myself, I looked upon them as among the most interesting operations I performed during the war. In both the lives of my patients were saved, where otherwise death seemed inevitable. One was a surgical fracture

of the femur to remove an imbedded ball, reported in the CINCINNATI MEDICAL NEWS, July, 1883; the other case referred to above was the operation of tracheotomy for opium poisoning, reported in the same journal September, 1880, in a paper on "Important Points in Surgery."

Since I reported my case of tracheotomy, to my knowledge it has been performed for poisoning five or six times in this country, and once in Europe, and in every case with success.

What is exceedingly interesting in connection with this subject is that opium should have a physiological selection for the larynx, a thing hitherto not suspected. Yet still, many physicians of observation and experience may have noticed that opium will often induce hoarseness, but I believe it has been attributed more to a medical lesion of the secretion rather than that of innervation. What the morbid condition of the larynx under the extreme influence of opium is, is an interesting subject for speculation. In all probability it has the same action on the larynx it has on the eye, that of contraction, but again, it may be an extreme anti-spasmodic.

Editorial.

THE AMERICAN ACADEMY OF MEDICINE—MEDICAL EDUCATION.—For the first time since its organization the *American Academy of Medicine* held a meeting in the West, when it met in Chicago last November. Leartus Connor, A.B., M.D., of Detroit, the President, delivered the annual address, with a copy of which he has kindly favored us.

As Dr. Connor says, some assert that the American Academy of Medicine is founded upon a new idea, a "fad" born of an aristocratic notion. But such a notion is an error. Its object in requiring as a qualification of membership, the possession of the degree of A.B. or A.M. from a literary college or university is for the purpose of encouraging those who contemplate entering the profession of medicine to first seek a thorough preliminary education, by showing that such mental training is regarded necessary in order to become competent practitioners of medicine. The organization of a medical society, therefore, the members of which had had conferred upon them by a legally constituted body such marks as are accepted as evidence that those possess-

ing them had pursued a regular course of study in literature, the sciences, and the classics, was deemed as a proper step to be taken for the purpose. By this means a large number, at least, of the profession can show the value they place upon education as qualifying for the practice of medicine.

In 1870 Harvard Medical College raised its standard of preliminary requirement, and proportionately its general curriculum. In Dr. Connor's address we find President Eliot's description of the change in the character of the students which followed upon the change. We quote as follows: "Until 1870, the students in the medical class of Harvard were noticeably inferior in bearing, in manners, and in discipline, to the students in other departments; now they are indistinguishable from other students." He then adds: "A corresponding change in the medical profession at large would be effected in twenty years if all the medical schools of the country would institute a reasonable examination for admission. Under the present order of things, the American physician and surgeon may be, and often is, a coarse, uncultivated person, devoid of intellectual interests outside of his own calling, and quite unable to speak or write his own mother tongue with clearness and accuracy. To set in operation agencies which will enable all medical students to rank with any other professional students in gentlemanly bearing, and to supplant the coarse, ill-bred, ignorant physician by one who can comprehend the intellectual forces operating in the community about him, and can meet on equal terms any individual who has become possessed with the intellectual training of his time"—such, as Dr. Connor says, is the mission of the Academy.

In a recent issue, the *Lancet*, of London, in an article on medical education, made the following statement: "If Medicine is to acquire and sustain a high respect for its membership, such as is given men of science, art, and other professional callings, its membership must be equipped with all the richer learning which is required to hold its own in a world that is daily becoming more cultured, and will certainly demand more of its medical advisors. Its members must have large physical and mental energy, capacity for long continued efforts, an unselfish devotion to their work, and a high moral life. The practitioner of the future must know more than his father knew, and know it in quite a different manner. Here and there one may leap over all

obstacles, and in spite of unfortunate antecedents mount to the front rank. But the vast majority of the medical profession can reach that rank only by the most thorough and systematic cultivation of every physical, mental and moral faculty, before they enter upon the study of medicine. Then, if ever, the physician must make the acquaintance of the great world of literature, philosophy, art, poetry, language, etc., which has been growing out of the labors of countless hosts who have lived, and by their toils made it possible for us to accomplish more than they in the short span of human life. At such time, or never, the student must master the objects and forces beneath the earth's surface, upon the earth's surface and above the earth's surface. By microscope and telescope, and all other scopes, by retort and test-tube, by heat, light, electricity, chemical force and gravitation, he must follow the great teachers into the revealed mysteries of Nature. Only thus can he come to know something of himself, and of the human beings whose ills he would learn to prevent, remove, or alleviate."

We know that not a few medical men are of the opinion that it is a waste of time and money to strive after knowledge previous to entering upon the study of medicine. They do not seem to understand that education disciplines and expands the mind, making the acquisition of medical knowledge more easy and more rapid, when the study is entered upon, and also develops the reasoning powers and the judgment for the practice of medicine. But we regret to say that with many knowledge is valued only so far as it can be used to make money. Many times have we had an illiterate doctor, who had a large business and was making a great deal of money, pointed out to us, and been asked, "Why seek learning preparatory to studying medicine, when evidence can be produced showing that a large paying business can be procured without it?" Our attention has again and again been called to the fact that right here in Cincinnati—*the great center of wealth and culture*—the physicians of the largest practices are irregulars who have scarcely a common school education, while those who have a collegiate education and are adepts in classical learning have only business enough to enable them to make a living. But granting these facts, we still assert that while "blood will tell," education also will tell. While thousands of dishonest men get rich, yet it still remains a fact that "honesty is the best policy." If the acquisition of money was the great

object of life, then probably it would be advisable to seek only what knowledge was necessary to make money. But those who enter upon the study and practice of medicine for the fees they hope to receive, as Dr. Connor says, have made a fatal mistake. They had better, at once, devote their time and energies to some calling in which it is possible to accumulate large fortunes, for the pure tradesman has no more place in the temple of medicine than in the temple of religion.

We learn from Dr. Connor's address that there are a number of States in the medical colleges of which none of the students in attendance have the degree of A.B. They are Alabama, Arkansas, Colorado, Kentucky, Louisiana, New Hampshire, Oregon and South Carolina. Twelve hundred students attend the schools of these eight States, yet not one of them has any degree in the arts and sciences.

After an investigation of the facts, Dr. Connor states that it is a fact worthy of note that the A.B.'s were more frequent among those who had practiced medicine a quarter of a century or more, than among recent graduates. "This indicates that the proportion of A.B.'s in the profession is decreasing both relatively and absolutely."

"Finally, in estimating the entire medical profession of the United States from our present imperfect data, it would seem that two per cent. of A.B.'s would be a large allowance. Granting that there are three per cent., the entire profession would contain but about three thousand bachelors of arts."

But we must wait until another time before reviewing further Dr. Connor's very interesting address. It contains much of interest to medical men, and we regret that we can not quote further facts from it. But we will take it up soon again.

It will be seen that the American Academy of Medicine is engaged in the noble effort to raise the standard of medical education to the highest point. It has already accomplished much, but it proposes to accomplish still more. When not only the members of the profession, but also the laity, come to understand that there is an organization to which only physicians of learning can become connected, and that membership in it is accepted as evidence of superior qualifications, while the fact of not being a member of it is regarded as proof that the party's acquirements are not on a level with those which should be possessed by a mem-

ber of a learned profession, then every young man inspired with a meritorious ambition, if he should propose to enter the medical profession, will seek to secure the qualifications that will enable him to become a member of that organization. Membership in such a society, under the circumstances, would be the same as if the individual had had a medical degree conferred upon him of a higher order than the ordinary degree of M.D.—a degree the possession of which would imply the possession of superior qualifications for the practice of medicine.

THE WORK OF THE OHIO HUMANE SOCIETY OR SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN AND ANIMALS.—We have a number of times drawn attention to the humane and holy work of this Society—an organization that is kept up and enabled to proceed with its mission of carrying on a constant and unwearied war against cruelty, by such sinews of warfare as the humane contribute from their means. It has no resource in any public funds—every dollar that it expends must come from the pockets of those whose feelings have been awakened by the wrongs of the helpless.

To let some of our readers, who do not live in large cities, know what sort of work the Ohio Humane Society is often-times called to do, we will quote an item of local news from an evening paper published in Cincinnati. We will, however, first inform our "country friends" that occurrences similar to such as are detailed in the article, are, by no means, infrequent in great cities—similar, as regards vileness in connection with children, but varied, may be, in reference to the character of the conduct. The following is the local item :

"Katy Carey, a pretty little girl of twelve, residing with her widowed mother at 404 West Court Street, was sent to the Children's Home, by Lieut. Berg this morning, and will be permanently cared for at St. Joseph's Orphan Asylum. On Sunday a number of fellows came to Mrs. Carey's rooms and sent seventeen times for beer, remained all night, and slept off the effects of the debauch. The little one was rescued through the efforts of Officers Nunn and Smitherst of the Humane Society."

Previous to the organization of the Humane Society the poor child mentioned would probably not have been rescued from her vicious home, but would have been left in it to grow up amidst her vile surroundings. But the Society, by its own efforts, has had laws passed by the Ohio Legislature empowering the officers, which it itself appoints and

pays out of its own treasury, to enter a house where a child is exposed to cruelty and vicious surroundings, and rescue it, and put under arrest those engaged in mistreating it.

Unless rescued by the Society, the little girl would probably have been left to her fate, for the reason that, in order to save her, some citizen would have had to leave his business and take the responsibility to apply to the police office for warrants and subpoenas. Then, after causing the arrest of several parties, it would have devolved upon him to attend the trial and assume the role of prosecuting witness. But what man, even among humane men, would care about assuming such a task and such a responsibility? "What is every man's business is no man's business." It must be made the duty of some one to aid the helpless, or their wrongs, oftentimes, will go unredressed.

While there is no organization more worthy of help, to aid it in its noble work, yet it is astonishing to us that the rich and well-to-do as regards this world's goods, never remember it in the final distribution of their property by will. We often hear of bequests of from a thousand to many thousands of dollars to an orphan asylum, a widows' home, a college, art museum, etc., all of which are most creditable to the donors and should fill those benefited with feelings of thankfulness, yet, during the long time it has been in existence not a dollar has ever been bequeathed by will to the Ohio Humane Society. We regard this most remarkable when it is considered the great good the organization has done and is doing every day. Besides the vast work it does in rescuing lower animals and helpless children from cruel treatment and punishing the perpetrators, it has accomplished a great work in educating the rising generation in the duty that is owed to the helpless, patient, dumb brutes that serve men so faithfully as slaves, requiring in return for their services only to be fed and a little care.

THE RESULT OF A PHYSICIAN NOT UNDERSTANDING CHEMISTRY.—The recent death in Germany of a child as the result of taking a prescription containing an incompatible, viz., chlorate of potash and iodide of iron, deserves the attention of all practitioners. The iron was precipitated in the form of the sesquioxide, and all the iodine liberated. The following formula will illustrate the chemical changes which took place in the medicine: $2 \text{FeI}_2 \times \text{KClO}_2 = \text{Fe}_2\text{O}_3 \times \text{KCl} \times 4\text{I}$.—*Med. and Surg. Journal.*

TRI-STATE SANITARY ASSOCIATION.—Arrangements have been completed to hold a Tri-State Sanitary Convention at Wheeling, West Virginia, February 27th and 28th, 1890. Representatives will be present with papers and addresses from Pennsylvania, West Virginia and Ohio. The object of the convention is to consider the question of floods and their results from a sanitary standpoint, and the best methods of managing the sanitary interests of a given community after such a calamity.

Owing to the mutual relations held by these three States with reference to large rivers, and the numerous towns in each one of them that are annually affected by floods and their results, it has been thought wise to hold a convention for studying how best to manage the sanitary interests of cities and towns so affected.

Every person interested directly or indirectly in this important subject is earnestly requested to be present and assist in discussing the papers, and add whatever information he can to the solution of these practical and most important questions, affecting as they do the health and lives of thousands of citizens of these three great Commonwealths annually.

The following are some of the officers of the Convention : President, Dr. R. Harvey Reed, Mansfield, O.; First Vice-President, Dr. Benj. Lee, Philadelphia; Second Vice-President, Dr. C. F. Ulrich, Wheeling; Third Vice-President, Dr. Byron Stanton, Cincinnati; Secretary, Dr. George I. Garrison, Wheeling; Executive Committee: Drs. E. C. Meyers, Wheeling; John L. Dickey, Wheeling; John McCurdy, Youngstown, O.; Dr. J. P. West, Bellaire, O.; Dr. J. B. Kremer, W. E. Mathews, Johnstown, Pa.

The Committee on Entertainment is made up of twenty-five or thirty laymen of Wheeling, of intelligence and high standing.

Reduced rates of transportation have been secured over all lines controlled by the Central Traffic Association in the three States named, on the certificate plan. Application has been made to the Trunk Line Association for like favors.

THE BISHOP BACILLUS—THE MICROBE OF LA GRIPPE.—Finally it is claimed that the micro-organism causing La Grippe—Epidemic Influenza—has been discovered. A cablegram recently received states that the medical pro-

fession of Vienna are greatly agitated over the discovery of the bacillus of influenza by Drs. Maximilian and Adolphe Jolles, of the Bacterian Laboratory of the General Hospital. A reporter of the *New York Herald* says that he presented himself at the "farm" of the bacilli breeders, and found them quite ready to talk about their discovery.

"We came upon the trace of bacilli quite accidentally," said Dr. Maximilian Jolles, "about the middle of December, in a sample of urine sent us by a practitioner, who thought that his patient was suffering from kidney disease. Examining the urine microscopically, we discovered a bacillus which, owing to the peculiar cassock or motion of the head, we called the Bishop Bacillus. It was a bacillus we had never seen before, nor had it ever been signaled by any bacteriologist. We immediately set to work with the whole staff upon an examination of the dejection in the urine of influenza patients in the general hospital and in private practice, and in every case the Bishop Bacilli were found in great numbers, while in excretions from various other maladies, examined at the same time, the bacilli could not be found.

"This we did to avoid the argument brought against the Mexican doctor, Cordova, to the effect that the peronospera lutea is found in the blood of all who die in certain seasons at Vera Cruz, whether yellow fever be prevalent or not."

The Doctor then introduced the reporter into the laboratory, where, inserted in glass tubes, bacilli were seen at rest, and where the cultivation of bacilli was in successful progress. "As you see," said the Doctor, "they resemble in no way the cholera microbe, but have many points of resemblance with the bacilli of pneumonia discovered by Dr. Friedlander."

I then carefully examined bacilli in glass tubes stopped with cotton and half full of gelatine. On the top of the gelatine I noticed what, with the naked eye, looked like a milky white spot, round in form. With the microscope I saw small animalculae, elliptic in form and sharply defined. A great majority were yellow in color, but the largest and oldest, the cassock-shaped heads, were dark blue. They were lying parallel, and very close to each other. Then the Doctor showed me a tube containing Asiatic cholera microbes, which looked like fine cottony threads, and differed in every way from the influenza bacilli. As seen through the microscope the cholera microbe resembles an infinitesimal comma.

"I hope," said the Doctor, "that you will accentuate the absolute difference in form and nature between the two animalculæ, because it is still popularly believed that influenza is a forerunner of cholera, which it will be found, I think, we have scientifically disposed of. Now, on the other hand, the influenza bacilli and pneumonia bacilli are undoubtedly of the same family and analogous."

During the afternoon the Drs. Jolles drew up the following succinct account, which they addressed to the *Herald* as the best medium for simultaneously reaching the medical and scientific worlds in France, England and America.

To the Editor of the New York Herald:

In our own chemical microscopic laboratory we claim to have discovered the bacillus of influenza. During the epidemic in Vienna our attention was first directed to the very numerous capsule cocci, greatly resembling the pneumonia bacilli of Dr. Friedlander, which were brought to light in colored glass preparations, in spite of the fact that the sputum was of itself also, when microscopically examined, in no way remarkable, showing generally the characteristics of pneumonian bacteria, and although many scientific searches have found in normal sputum similar micro-organisms, which, however, differ entirely from the Friedlander capsule cocci, as they do not color their surroundings, and owing to the enormous number in which the cocci were found, making the sputa really appear like pure culture of the same, we felt called upon early in December to inform practitioners and our scientific confreres of this surprising and unusual find, and to point to the possibility of pneumonia being present in these cases. We continued the investigations carefully, and our supposition that it was a newly-discovered microbe organism which stood in connection with influenza grew stronger. We then proceeded to the cultivation of the cocci upon gelatine plate culture slides, and as soon even as four days discovered colonies which resembled strongly Friedlander's cocci. Deep down in the gelatine they looked like round, sharply-defined, yellowish, minutely-granulated organisms. When seen on the surface of gelatine they present the appearance of infinitesimally small porcelain buttons. Now for the comparison with the Friedlander cocci, which they resemble generally, but not when prepared with tube cultures. They showed the characteristic nail shape, but placed alongside the Friedlander cocci, the influenza bacilli appeared less brilliant, more bent and crooked.

Subjected to the aniline color tests, the influenza bacilli go through it very much like the Friedlander bacilli. By means of watery aniline colors we produced a fine preparation of slides. Before concluding the statement, it may be of interest to add that in the investigation of the Vienna water supply which we made December 26, we discovered, in addition to numerous saprophytic bacteria, some which gelatine magnified and some which resisted the magnifying process; also numerous nail colonies, in German nagel colonies, which under the microscope proved to be diplococci. In regard to the inoculation of animals by the process of attenuating virus, our experiments are not yet concluded.

DR. MAXIMILIAN JOLLES,
DR. ADOLPH JOLLES.

TRACHEOTOMY IN OPIUM POISONING.—The communication of Dr. Hachenberg, of Austin, Texas, entitled as above, was received too late to give it place among the original contributions. It will, therefore, be found following Book Notices. It is an interesting article.

THE RESPONSIBILITIES THROWN UPON LA GRIPPE.—The *Medical Record* says that La Grippe is declining. In the meantime everybody will have had it, or will believe they have had it, as it is too fashionable at present to allow of any different probability. But, according to the *Med. Record*, the culpability charged against it will be fearful. It will be charged with accountability for every dereliction of duty, every missed engagement, every indisposition for work, and compasses the diagnosis and tinges the complexion of every other malady. If every one who has had an ordinary cold has suffered from the grip, the latter must be very prevalent indeed. And who is there who dares dispute the fact when the patient makes his own diagnosis, and who reads the absurd sensational accounts of the supposed dreadful ravages of the disease as given in the daily press?

BIG OR ROYAL FEES.—The doctors who attended the late king of Portugal during the last few weeks of his illness presented bills for services amounting to nearly \$100,000. One demanded \$14,000 for ten visits; another demanded \$17,000 for fifteen professional calls upon his majesty; while a third thought that \$30,000 was not too much to ask for his attendance at eighteen consultations.

We feel sure that many of our American physicians would be willing to attend upon royalty professionally without price—or for “the honor and glory” that they would imagine would result—rather than miss the chance to attend, if that should be risked by charging a fee. We advise that, hereafter, the Portugese royal family import a doctor or so from the United States when any of them should be taken sick; for, we understand, that they protested against the payment of the doctors’ charges in case of the late king. It is stated that the new king eventually succeeded in effecting a settlement of their claims by means of a “lump sum” of \$60,000.

Of course, as an exchange says, this was polite robbery. In too many cases such estates are robbed. It seems to make no difference whether the patient is killed or cured, the bill for services frequently is made out according to the size of the sick man’s estate.

THE ASH-CART NUISANCE.—The *Medical Record* speaks of a proceeding in New York as a nuisance which we never heard characterized in that manner in Cincinnati; viz, the removal of ashes and garbage by the city carts during the day. “Soil” carts are compelled, in this city, to do their work at night, but we do not think that it has ever occurred to any one that the ash and garbage carts should also discharge their duties at night. But why not? Says the *Record*:

“One of the greatest nuisances of this city, and one that calls for a speedy abatement on the score of its menace to the health of our citizens, is the mode in which the ashes and garbage are removed. At one time it was the practice to empty the dusty and foul-smelling barrels in the nighttime, when most respectable people, except policemen and doctors, are safe at home, and this was perhaps the best that could be done. Lately, however, we have noticed that the rounds of the ashman are made once more in the daytime, and the lungs of passers-by are filled with the possibly disease-laden dust, and their stomachs are turned almost inside out (to speak after the mode of the ordinary citizen, and not in scientific terms) by the villainous odors of decaying animal and vegetable refuse. Can not this nuisance be abated, and one of the miseries of life, in a great city, be thereby prevented?”

THE EAR AFFECTION OF THE EMPEROR OF GERMANY.—The ear affection of the Emperor of Germany is a *chronic suppurative otitis media*, and in consequence of pressure of business is dangerously temporizing with the treatment advised by his medical attendant. With a hereditary predisposition to scrofula, and a consequent chronicity of the affection, it will be a question of time only when the affection shall take an incurable turn, and invite directly an extension of inflammatory action to the meninges. In this country the disease is regarded as curable by surgical interference.

It was reported that the disease from which the infant king of Spain was recently suffering was tubercular meningitis, but, as it is announced that he has recovered, it is probable that it was a mistake—that it was capillary bronchitis, complicated by the influenza from which he had been suffering. An exchange judges from his likeness that he is a feeble son of a feeble sire. “With a hereditary taint of scrofulosis, and with a necessarily strong predisposition to phthisis, the chances of a long life are very much against him, not the least of which is shown in his large rachitic head and his comparatively puny body.”

THE “ANNALS OF SURGERY” has now entered upon its sixth year of publication. Much praise is due both to the home and foreign editors for the high literary standard sustained. This is the only journal published anywhere in the English language devoted exclusively to scientific surgery, and which does not seek popularity by giving minor surgery, but rather bringing the reader up to the highest literary and practical attainments in surgery, nor does it in the least degree cater to advertisers. The numbers are profusely illustrated with fine engravings and diagrams, elucidating the text. It is worthy the patronage of all members of the profession who do any surgery. Five dollars per year. Sample copies fifty cents. J. H. Chambers & Co., St. Louis, Mo., are the publishers.

DIOVIBURNIA is said to be not only valuable in the treatment of uterine diseases, but is a good general tonic in addition. The class of cases it has been used in mostly has been a lax condition of the womb and its appendages, which needed toning up.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 266. } FEBRUARY, 1890. } VOL. XIX. No. 2.
Old Series. { New Series.

Original Contributions.

A Contribution to the Study of the Traumatic Neuroses (Railway Spine).

BY DR. L. BREMER, ST. LOUIS, MO.

Read before the Missouri State Medical Society.

THE symptom grouping which since the publication of Erichsen's well-known book, has been known as railway-spine, a name which has passed into the medical literature of all languages, has of late years has been studied with ever increasing interest. Aside from the great scientific interest which attaches to the peculiar and often incongruous manifestations of the disease which even to-day offers a still unexplored and fruitful field for research, it was the practical importance of these cases, especially the damage suits in their varied medico-legal aspects, which of late has given rise to closer observation and study.

Unfortunately we are to-day, twenty-two years after the appearance of Erichsen's book, almost as far removed from a thorough understanding of the symptoms, as we were at that time when Erichsen published the startling results of his experience and created one of the greatest medical sensations of our century. The reason of our ignorance of the essence and the true inward nature of railway-spine lies in the almost absolute lack of *post-mortem* examinations.

Yet, it must be admitted that modern investigators, though not able to establish the pathogenesis of the ailment, have succeeded in doing away with a considerable mass of superstitious rubbish that used to cling to the subject, and by the comparative study of related disorders, have been enabled to throw considerable light on the nature of certain heretofore unexplainable and paradoxical symptoms.

Erichsen assumed that these symptoms arose from a

meningo-myelitis, and held this to be the anatomo-pathological substratum of the clinical signs of the disease; later, under the influence of Hammond's teaching, the anaemia theory gained ground. While the former was definitely abandoned many years ago as untenable, the latter view still counts a number of adherents, although there is not a shadow of positive pathological evidence justifying such assumption. There is no practical neuropathologist who ever could demonstrate the anaemia or congestion of the spinal cord or the brain as being a pathological entity, and the whole theory has to be relegated to the realm of fiction. The modern exact methods of microscopically examining the central nervous system, especially the improved staining processes, have demonstrated that what used to be described as anaemia or hyperaemia, denote in reality quite different lesions, and that the whole literature of several decades past, based on the anaemia or hyperaemia theories, rests on fancy, not on facts, and is consequently utterly worthless.

A step forward in the task of clearing the field of clinical and pathological delusions was made by Page ("Injuries of the Spine and Spinal Cord," 1885). Although this author never saw a *post-mortem* of a genuine case of railway-spine (up to 1885 but one instance of a reliable autopsy is on record, made by Lockhart Clarke), he has done his share, by adducing the testimony of authorities and by his own reasoning, to discredit the anaemia theory. He sides with those who consider the disease known under the misleading name of railway-spine, as an affection of the brain rather than the spinal cord, and lays greater stress on the physical symptoms. The negative results and the scanty number of autopsies lead him to assume with other observers the existence of a *molecular change* of the central nervous system, an utter absence of any lesion demonstrable with our present means of chemico-microscopical investigation.

Quite recently two well-known investigators have made the disease in question a special object of study, Charcot of Paris, and Oppenheim of Berlin. But even these authors, with the enormous material at their disposal, never had an opportunity of substantiating the clinical inferences by *post-mortem* examinations. Their ideas respecting the nature of "railway-brain" rest on clinical observation exclusively.

Charcot, during the first year or two devoted to this study, became convinced that the disease was nothing but male hysteria, "*rien que l'hystérie*," and called it traumatic

hysteria, maintaining that the symptomatology was in all its details exactly like that observed in women.

In opposition to the French author, Oppenheim tried to show the somatic ground-work for the general nervous and psychical manifestations, emphasizing the optic atrophy and pupillary rigidity met with in a number of the victims of railway collisions, as pointing to coarse cerebral disease. Thus there were two schools on the European Continent fighting against each other with facts and arguments. Of late there has been on either side a modification of the views rigidly adhered to before. Charcot, after the proof had been furnished by Oppenheim that the variegated anaesthetic and paralytic symptoms in the patient did, as a rule, not correspond with the hysterical form of paralysis and anaesthesia, receded from his former position, and now declares the essential and characteristic signs of railway-spine to be "dynamic and physical paralysis very similar, to say the least, to the hysterical" (*paralysies dynamiques et psychiques, fort analogues, pour le moins, au paralysies hystériques*).

Oppenheim, too, has made a step in the direction of a compromise, by abandoning his insistence on the organic nature of the disease resulting from concussion or vibratory jar. He declares the railway-spine to be a neurosis of traumatic origin. Thus, there is no vital difference between the views on this subject between these two observers who, owing to the unexampled material at their command and the prominent position which they hold in neuro-pathology, are most competent to form correct opinions on the nature of the disease in question.

It is a traumatic neurasthenia then, an enfeeblement of all the functions, or, to use a still less prejudicial term, a "traumatic neurosis" (Oppenheim), which results so often in the sufferers from railway collisions and from any injuries, especially of the head, which, at the time of their reception, are accompanied by fright and alarm. Whether this latter element is indispensable to the production of the mottled clinical picture presented by the traumatic neuroses, is somewhat doubtful to my mind. The one requisite, more important than any other, is that in spite of a formidable array of the most diverse symptoms, there is an utter absence of any objective sign pointing to coarse or demonstrable microscopical change in the central nervous system.

I shall not tire you with an enumeration of the many symptoms of the disease. You are all familiar with them.

The record of one of the cases that came under my observation may be worthy of a brief statement as a type of the disease.

J. G., a very intelligent farmer, now 35 years old, went through a railroad accident six years ago. Up to that time he claims to have been perfectly healthy. In the smash-up he broke his left forearm and leg.

His head and spine were free from injury. The only symptom he noticed first was a persistent sleeplessness, which withstood even the largest doses of the various hypnotics, whereas the fractures healed quickly and without any untoward symptoms. Ever since he got up, however, he has been troubled with recurring frontal headache, crawling and creeping in the forehead, with tingling in the extremities, numbness in his left arm, dyspepsia, dimness of vision, mental depression, abnormal excitability, gradually increasing impairment of virility, terminating in absolute impotency, and catarrh of the bladder. The left pupil is dilated, the knee-jerk on either side is somewhat exaggerated. Aside of these two last symptoms there is no other objective evidence of disease. Whenever he gets greatly excited, he vomits; when less so, he feels nauseated. His general strength is greatly lessened. The trouble, though progressive during the first three or four years, has of late become stationary.

The recording of a case of a traumatic neurosis, due to a railroad accident, is not complete unless a statement be inserted as to whether or no a suit for damages was instituted by the patient, and what effect a settlement had on the course of the disease. There was no suit brought in this instance, and the typical, or at any rate the majority of the typical symptoms of railway-spine existed six years after the accident, and probably exist at the present day. I make this statement for the reason that there are, even at the present day, some physicians who claim that there is no such a thing as railway-spine, that its symptomatology is based upon fraud and simulation.

I could, as other writers have done, multiply instances of the kind where a simple and apparently slight concussion of the central nervous system brought about the train of symptoms characteristic of traumatic neurasthenia. Among others I have in mind the case of a middle-aged lady who slipped on the side-walk, fell flat on her back, and gradually developed some of the most distressing neurasthenic

symptoms, such as uncertainty of gait, vertigo, numbness, pins and needles in the extremities, sleeplessness, excitability and general enfeeblement. There was certainly no simulation in this case nor in a great many others that I can recall to mind, who passed many years in chronic invalidism.

That there are many instances of brazen-fronted shamming in connection with concussion of the central nervous system, is forsooth a matter of common observation, and yet, in spite of apparently well-grounded suspicion, the physician ought to be careful in charging a case to malingering without the closest scrutiny.

The following may serve as an example: About four years ago I examined, at the St. Louis City Hospital, a negro who several days previous to his admission had been injured in the quarry of the work-house by a heavy stone falling from a considerable height on the left side of his head. The external injury was not a serious one, there was no fracture of the skull. There had been no loss of consciousness, no very great pain in the head; but, in addition to a number of paraesthetic symptoms, there was a paralysis of the leg on the same side as the head injury. This statement, of course, aroused the suspicion of malingering, especially in the case of an inmate of the work-house. Sure enough, the application of a powerful faradic current put the negro on his feet, and he willingly left the hospital for the work-house, being evidently much afraid of the electric current. This result seemed to verify the diagnosis of shamming, and once more to demonstrate the unalterable law of contralateral paralysis in unilateral injury of the head. The case had entirely passed out of my mind, when, several months ago, I happened to meet in one of the city parks a negro who excited my curiosity on account of his peculiar spastico-paretic gait. During a conversation in which I engaged him, I found that he was the same individual whom I thought I had unmasked as a malingerer years ago. He told me that after having left the hospital, he had resumed work in the quarry; that the electrical shock had improved his leg, but only for a short time; that later on he got fits and was discharged. Since then he has been unable to do any work, and has been living on the charity of his friends. Formerly a very muscular man, he looked now wasted, moved about with difficulty, had trouble in making water, and suffered continually from a dull headache. The whole of the left side was weaker than the right. He was a complete

wreck, the very reverse of his former self. This case taught me how imprudent it is to proceed in the examination and the judging of nervous affections in too dogmatic a manner.

Shortly after this experience I saw a farmer who had been thrown from his wagon while his horses were running off. He landed with his head on the stump of a tree and received a scalp wound of considerable extent over and behind his left ear. An examination two months after the accident revealed the fact that from the very sensitive cicatrix, attacks of unconsciousness, accompanied by slight tremor of the facial muscles, could be produced; the left arm was paretic and anaesthetic; the patient had crying spells; his pulse varied between 115 and 130; he was at times very irascible, quite contrary to his former character. He was impotent and had no control over the bladder. I saw the patient only once, and the excision of the cicatrix is said to have brought about a considerable improvement of all the symptoms.

In this case, again, was there paresis on the same side as the injury of the head. Dr. Prewitt, of St. Louis, related to me a similar case of traumatic neurosis in a young man whom he too suspected of malingering on account of an alleged equilateral paresis in an injury of the head.

Probably my attention would not have been fixed on this peculiar symptom, and possibly I might have received such a statement from a patient with incredulity, and consequently paid no attention to it, had I not read a passage in Oppenheim's book in which he refers to this peculiar feature in the symptomatology of the disease. Erlenmeyer, in a review of Oppenheim's book, goes even the length of saying that equilateral paralysis in unilateral lesions of the head are pathognomonic of traumatic neuroses.

The most plausible explanation of this extraordinary phenomenon is afforded by the theory of auto-suggestion, a belief which is entertained by Charcot and Oppenheim. The morbidly altered mind, fixed with hypochondriacal anxiety on the most minute symptoms or sensations supervening in the course of the malady, will, through fear and apprehension, magnify any little weakness in the lower extremities, and the average patient, not being acquainted with the law of decussation of the central conducting nerve-tracts, will locate and fix the trouble on the side of the head-injury. Continued attention will intensify the ailment. Thus the hysterical (self-suggested) element becomes apparent; but it would be erroneous to put a motor dis-

turbance of such character down as insignificant, since it is well known that hysterical paralyses may be as grave and lasting as those due to coarse lesions. Nay, it has been asserted by no less authority than Charcot that even hysterical paralysis may lead to atrophy of the muscles involved, with the physical sign of degenerative reaction.

Whether such self-suggested paralysis would be on the opposite side to the head-injury in a person familiar with the physiology of the central nervous system, is an interesting point for observation.

There are cases which, by the gravity of the symptoms and their sudden disappearance, are apt to astonish the medical practitioner, and although he may not have heard of Charcot's "male hysteria," will suggest to him hysterical exaggeration. Thus, there were in the following case a set of symptoms which by their multiplicity, heterogeneity, severity, and withal transient character, were quite perplexing to the physicians who examined him :

In 1884 an employe of the Bridge and Tunnel Company, of St. Louis, fell from a freight-car, striking the ground with his head. There was no injury visible. I do not know whether he became unconscious. He was taken to his boarding-house, where he was seized with a number of attacks of opistho-tonic spasms of such intensity that his body rested on the occiput and the heels. There was concomitant loss of consciousness. On the next morning he walked to the St. Mary's Hospital, where the attacks repeated themselves. Between them he walked about in an unconcerned manner, felt perfectly comfortable, and could not be prevented from smoking cigars, averring that there was nothing the matter with him. During the week following he became para-paretic so that he had to use crutches. He had the most diverse kinds of paræsthesiæ and anæsthetic spots in various parts of the body ; then he became photophobic and absolutely color-blind, the visual field being also narrowed ; later on, the muscles of deglutition were paralyzed, so that he had to be nourished by means of the feeding-tube ; next, there was absolute anæsthesia of the right leg ; he wound up with a paralysis of the detrusorvesica and loss of sexual potency. From all these symptoms he recovered, in the order in which they had come on. In the course of seven or eight weeks he was in a condition to leave the hospital and to take a trip to Chicago, where, on the advice of friends, he had "his skull opened." When

the wound had healed, he married and returned to St. Louis a well man, as alleged by his friends. Neither the consulting physicians nor myself saw anything of the man ever afterward. I am convinced that all the symptoms were genuine. There was not a trace of an attempt at even exaggeration; on the contrary, he made light of his symptoms. Judging from his unconcerned behavior, however, in face of the grave symptoms he presented, I think that he was a person not in his right mind.

The company gave him a moderate sum of money, in order to prevent future litigation. Although I never have seen this man since he left the hospital, I feel convinced that there will be a stain left on his nervous system; nobody can pass through a series of such profound nervous disorders without the nerve-tone being permanently lowered. As insanity leaves a blot on the mind, so a large majority of the cases of traumatic neurosis will be left in a state of impaired capacity for work.

If such patients are in the employ of corporations who are willing to assign them work which requires neither mental nor bodily stress, they may be capable of gaining a livelihood. Thus, for instance, there are a number of firemen in St. Louis who have acquired traumatic neuroses while in the discharge of their duties; they are unfit for the ordinary work of the fireman, but the department gives them positions as night-watchmen, etc., which they fill to the satisfaction of their superiors; the same is true of injured employees of railways and other corporations. But their former degree of independence of selecting work that suits them is gone, their working capacity impaired.

In consequence of the dark prospects *quoad valetudinam completam* of such patients as have sustained a graver form of the malady, the juries of this country are only too willing to award ample damages to the victims of accidents. Some one has estimated that in the United States and England alone about \$25,000,000 is annually paid to injured employees, among which the cases of railway-spine represent a considerable figure.

[CONCLUDED IN NEXT NUMBER.]

Origin and Propagation of Diphtheria.

BY B. B. LOUGHEAD, M.D., RAVENNA, OHIO.

DIPHTHERIA is a specific, contagious disease.

Its history is lost in obscurity. Some hints of its prevalence are found in our oldest medical literature. We know that it was recognized two thousand years ago, and it is possible that some of the plagues of ancient times were due to the same poisons that swell our mortality lists to-day. Hippocrates was one of the first observers to describe the disease, and he gives the name of the first recorded victim of its violence.

Being a specific disease, its virus is peculiar to itself, and is not capable of producing any other disease. The poison of diphtheria produces diphtheria, and diphtheria only.

The power of producing this virus has been ascribed to as many different causes as there have been different conditions under which the disease has been observed. At one time sewer-gas has been declared the cause, and at other times it has been compost heaps, cesspools, impure water, crowded tenements, decaying vegetation, and so on. Any odor about the premises where a case occurs, obnoxious to the delicate and æsthetic olfactory organs of the attending physician, has been denounced as the *causus morbi*. Indeed, so anxious have we become to fix the cause of this disease upon filth, that no family can suffer from diphtheria and not also suffer the imputation of being unclean! Thousands of people have perished from diphtheria who never were within five hundred miles of a sewer, and thousands of others have perished from its deadly power out of homes as clean and pure as science and care could make them. I believe in cleanliness—believe it is next to godliness, but believe uncleanness has enough power for evil without ascribing to it the powers of producing a specific virus.

If a disease occurs under varied and dissimilar conditions, it is reasonable to conclude that it is not dependent upon the conditions for its existence. This I believe to be true of diphtheria, and that the disease is microphytic in its origin—that it originates in a pathogenic micro-organism, and should be classed with those diseases that have been demonstrated as microphytic.

It is not the purpose of this paper to discuss the germ

theory of disease—which is no longer a theory, but a demonstrated fact, but to point out at this place that diphtheria, both by analogy and by experiment, may safely be classed as a disease produced by a pathogenic micro-organism. If the disease is caused by a microbe, it must be conceded that the disease does not originate *de novo*. No combination of unhygienic conditions can create a specific organism, the germ of that organism being absent. The germs of the diphtheria of to-day are direct descendants of the germs that caused the disease that Hippocrates and Celsus treated ages ago. The hygienic surroundings may have much to do with the propagation of the disease; *i. e.*, filth may afford for these microbes nourishing material that may make them more perniciously active, but filth can no more originate diphtheria than it can originate smallpox.

Although the presence of the specific microbes is essential to the disease, it is evident that some other factor is necessary also; for all who are exposed to the infection do not suffer from its pernicious action. Indeed, the same individual may be exposed to the contagion many times, and finally fall a victim to its virulence. This unknown factor within the individual, which inhibits this action of the poison at one time, and urges it on to pernicious activity at another, is a most interesting field for inquiry.

If this unknown factor in the disease is a condition either of the system or the parts invaded, what constitutes that condition? We name this unknown factor in the disease "resistance to the infection" and "susceptibility to the infection," but our names explain nothing. That there is some thing or some condition present at one time and absent at another which decides, not only whether there shall be a disease process, but also the extent or severity of that process, all who have observed the disease will probably admit. Further than this we have no facts upon which to predicate a solution of the problem.

The second inquiry of our subject is the propagation of diphtheria. I suppose those who assigned this subject meant by the propagation of diphtheria, not only the methods by which the virus renews itself or retains its vitality, but also the various means by which the infection is disseminated.

If the disease is caused by a micro-organism, like all organic life it must soon perish unless it renews itself

through fertilization. The exact length of time a germ of the disease retains its vitality is not known. Probably but a few weeks—from six to twelve. Instances have been recorded where the disease has been induced by exposure to some infected garment some weeks after the article was infected. Even in these cases there may have been fertilization without renewal through the disease process, but the generation ultimately perishes for lack of nourishing material. The germ undoubtedly renews itself with greatest fertility through the diphtheritic process. This process may occur either in the human being or the lower animals. The most frequent method by which the disease is spread is by direct contact with those suffering from it. It is by this means that the disease spreads among members of the same family, and in neighborhoods where a sympathetic interest is taken in any case of sickness, and the friends and neighbors assist in the work of nursing the sick. The disease is often carried by some convalescent whose clothing has not been properly disinfected, returning to school or visiting among neighbors. In this way a single case may be the means of infecting a whole neighborhood. Members of a family in which a mild case of sore throat exists may carry the infection miles away by a visit to some relative. A case of this kind occurred of which I have personal knowledge. One of Mrs. A.'s children had slight sore throat, but not sufficient to call a physician. A few days later Mrs. A. visited her sister, four miles away. When she returned home at night she found her two other children sick with diphtheria, and four or five days later one of her sister's children was taken with true diphtheria. In this case there was no other means of exposure, and Mrs. A. undoubtedly carried the contagion in her clothes.

Many cases where convalescents have spread the disease could be cited. Domestic animals may be carriers of the contagion. The shaggy hair of the common poodle dog may bear the infection from house to house in a neighborhood where it is the pet of all the children, being used to amuse a child sick with the disease, and afterward caressed and fondled by children in other families. Domestic animals not only carry the disease from house to house, but they may suffer from diphtheria, and communicate it to members of the family where they are harbored. I will show by illustrations which follow, first, that domestic animals having the

disease may communicate it to children who play with them ; second, that the disease may be communicated to domestic animals by children suffering from diphtheria, and by the slops from the sick-room ; third, that diphtheria may be communicated from one lower animal to another of different species. That diphtheria is communicated from lower animals to human beings, is well illustrated by a case reported in the *Medical Record* by Dr. William Bunce, of Oberlin, whom many of you know. He says : A young lady eighteen years of age had diphtheria of a severe type, which terminated fatally on the third day. In a short time the disease developed in the mother and two remaining daughters. A half-grown cat in the room was found to have well-marked diphtheritic membrane in its throat ; it was also learned that its mother and four other kittens had been in the same condition. The girls had endeavored to cure the cats by removing the membrane. In this way they had exposed themselves to the contagious influences of the disease.

That domestic animals may take diphtheria from being handled by children who are suffering from the disease, is illustrated by a case reported in the *Medical and Surgical Journal*. In a house where there were five children sick with diphtheria, three kittens that played with the children sickened and died. Post-mortem examination showed diphtheritic membrane in their throats. Dr. S. Roth, of Kitzen-gen, observed an epidemic of diphtheria in a flock of hens. It was caused by the slops from a room where two children had been sick with diphtheria being thrown upon a dung heap in the yard where the fowls were kept.

Mr. Cole, a veterinary surgeon of Australia, reports a case illustrating that the disease can be communicated from one animal to another of a different species. A calf had a throat disease (presumably diphtheria), and died. A sow got access to the carcass, and ate some of the meat. Within a few days some of the pigs were taken down with throat disease, and a short time after the sow and her young pigs were victims to the disease.

It is unfortunate that we have not a fuller report of this case, as it might throw some light on the question whether the meat of the calf communicated the disease to the sow, and also whether the virus was excreted through the milk, and thus infected the pigs.

These illustrations have been chosen from many which

are at hand, all proving clearly that the lower animals do suffer from this disease, and it follows that the virus is kept alive by renewing itself through the disease process in animals of lower orders, and many mysterious outbreaks of diphtheria which have seemed to indicate the *de novo* origin of the disease may be the result of exposure to the disease in some of the lower animals.

Milk from diseased cows has been supposed to disseminate the poison of diphtheria. It is not in place here to discuss the question whether the garget in cows is a true diphtheritic process, although there is considerable evidence to show that the milk from a cow having garget, or perl-speck, does communicate diphtheria to those using the milk. It is sufficient to know that milk may be a carrier of the germs of the disease.

An epidemic occurred in the Oakleigh Police Station, and was supposed to have originated in the milk of a diseased cow, which had been used by the inmates of the Station.

The following cases, taken from reports in the *British Medical Journal*, are in point:

At the Princess Mary's Village Homes forty-eight persons were attacked with diphtheria. The water-supply of the farms, which supplied milk to the homes, was found to be impure. One of the cows had the garget, and the epidemic began to decline rapidly eight days after the stoppage of the milk-supply. There was nothing else but the milk to which the epidemic could be attributed.

At Leatherhead, in the course of six weeks, fifty-five persons were attacked with diphtheria. There was nothing in common among the families to which the disease could be traced except the milk-supply. Almost all of the families attacked were supplied from the same dairy.

At Sutton fifteen persons were attacked with diphtheria in two days. These persons lived in different parts of the town, and under good sanitary conditions, but they were all supplied with milk from the same dairy. Nothing wrong could be found at the dairy.

Although the evidence that milk is the carrier of germs is not conclusive, it is sufficient to make it strongly probable that such is the case, and makes it a possible means by which the virus is propagated.

A strong wind prevailing in one direction for some days

has been observed to determine the direction of the spread of an epidemic. By this means also houses remote from the disease, where complete isolation has been practiced, have been affected, although at some distance from the disease. In thirty epidemics of diphtheria observed in England, with special reference to aerial propagation, it was found that the direction of the wind had special force in disseminating the disease. Houses that were completely isolated suffered from the disease when the wind prevailed from the direction where it was known to exist. I believe it is generally conceded that the poison of malarial diseases may be carried by the wind, and there can be no reason why the germs of diphtheria may not be driven by the wind, even to a great distance. Indeed, it may easily be true that certain conditions of the atmosphere favor the propagation of contagious diseases, and certain other conditions may be unfavorable to such propagation. This is certainly a field in which our State Board of Health can labor with the prospect of arriving at the truth by collecting a large amount of data.

There are many other methods by which the disease may be propagated, but of which time will not permit us to speak. When we throw away entirely the idea of mystery, which has clouded our view of its origin, and look upon the disease, not as a mysterious visitation "that comes," but regard it as something that is brought, then our means of preventing the spread of the infection will become much more effectual.

From a study of the origin and propagation of diphtheria, we easily pass to the means of preventing infection. A knowledge of the origin and propagation of the disease is of very little use except as it assists in determining means of prevention and of treatment.

Prevention divides itself into three methods, two of which are in common use; the third may be available, but is little used at present.

Isolation is the oldest method by which the spread of contagious diseases is limited. It can never be complete, and therefore alone can never succeed in fully restraining the spread of the contagion; that it is not as complete in diphtheria as in smallpox is owing to the lack of knowledge among the people of the extreme contagiousness of diphtheria, and also that one attack does not afford immunity

from succeeding attacks. That there is no class of people to act as nurses who are not subject to the influence of the infection. That it is not regarded by the people as an extremely contagious disease, I believe to be largely due to the teaching of the profession. Many physicians to-day do not consider it a highly contagious disease, and great carelessness is shown by the families who have the disease in the matter of sending other children to school, attending church, visiting neighbors, etc.

The second means by which it is sought to limit the spread of the infection is by disinfection.

By this term is meant the use of such means as shall effectually destroy the contagion. Undoubtedly in this disease germicides take first rank. I shall not enumerate the large class of articles that are used to accomplish this purpose.

No inferior article should be trusted when a better and more efficient article is at hand. The State Board of Health has issued a pamphlet on disinfectants in diphtheria, and their instructions are more complete than any I can give. Disinfection should include all articles of furniture, tapestry, clothing, and even the house itself.

The third and last way by which the spread of the disease is limited—I should say, will be limited in the future—is by the use of some agent by those exposed to the infection, by which the nourishing material upon which the virus thrives shall be removed and the germs of the disease shall fall upon sterile soil. This has been accomplished in the case of smallpox.

Pasteur is attempting the same thing in rabies. We have an agent in quinine which certainly inhibits the poison of malaria upon the system. It is just as probable that we shall find an agent that will render the system invulnerable to the poison of diphtheria, or at least so limit the destructive power of the germs that the disease shall only appear in a benign and harmless form, as that vaccinia should supplant smallpox, or that quinine should render negative the malign influence of malaria. When this agent is once found—and I believe it will be found—epidemics of this dread disease will be unknown, and only sporadic cases occur, as is the case now with smallpox.

Selections.

Have We an Infallible Treatment for Diphtheria?

BY P. E. WAXHAM, M.D., CHICAGO, ILLINOIS.

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FROM time to time certain remedies have been brought before the attention of the profession and the public, and the most exorbitant claims made as to their efficacy. Many of these remedies have been found useful, some useless, some positively injurious, and none at all entitled to the name of *specific*. Recently a line of treatment has been proposed and advocated with the greatest earnestness, zeal and eloquence. It not only has been advocated as infallible, but the declaration even made that the ordinary preventive measures were unnecessary. Such teaching should not pass unchallenged, and I therefore crave your indulgence and raise my voice in opposition.

There is no specific remedy for diphtheria, and there never can be one, and this can honestly be said without any discredit to the medical profession.

All accidents and physical injuries vary in degree from the most trifling to the most appalling.

All attacks of diphtheria in like manner vary in intensity; some mild and insignificant and unassociated with danger, others again of the most malignant and virulent type and entirely beyond our control. Not only this, but each individual varies, in resisting power, in inherent vitality. A disease that kills one patient may be recovered from in another, under the same identical treatment, on account of this greater vitality. It is just as unreasonable, just as absurd, to believe that we can cure every case of diphtheria, as it is to believe that we can prevent death in every case of accident. True it is that in case of physical injury we can often prevent a fatal issue. We can ligate the severed artery, we can set the broken limb, we can dress the wound antiseptically, and often conduct a case to safe recovery that otherwise would surely perish. The same is true of diphtheria; by careful nursing, by the *early* and *thorough* application of the most approved methods of treatment, and by timely surgical interference, we can save many a case that

would just as surely perish ; but to claim that all cases can be cured, and that we have an infallible remedy, is asserting more than human power can accomplish. In proof of these assertions I would report two cases coming under my observation where death occurred in spite of the most rigid employment of so-called infallible treatment.

CASE I.—I was called December 20th, 1889, in consultation by Dr. Geo. E. Willard, to see a boy between two and three years of age, and learned that the patient had been sick three days with diphtheria. He had a year and a half previously suffered from a very severe attack of diphtheria and croup, from which he recovered after being desperately sick. He had recently been in good health, and his present attack seemed only of moderate severity. Upon examination it was observed that the uvula was elongated and with some membrane formation upon it ; some exudation was also present upon the lateral walls of the pharynx and the nasal cavities somewhat involved. The pulse was good, the child bright, and altogether the case seemed a hopeful one ; so much so that a favorable prognosis was given. The patient had been from the first upon full and frequent doses of iron and general supporting treatment. In view of the fact that an infallible remedy had been proposed, we felt it our duty to give it a trial, and it was remarked by Dr. Willard that this would certainly be a fair and safe case in which to test it. In place of other treatment the child was given the following mixture :

Ry.	Tr. myrrhæ,	.	.	.	.	ʒiii.
	Potass. chl.,	.	.	.	.	ʒi.
	Acid. carbolici,	.	.	.	.	grs. iv.
	Mel. despumat,	.	.	.	.	ʒiv.
	Aquæ q. s. ad,	.	.	.	.	ʒiv. M.

Sig. : One-half teaspoonful every half hour. The same mixture was used as a spray for the throat, and diluted one-half, and also used as a wash for the nasal cavities. Stimulation and proper nourishment were also insisted upon. The medicine was given with religious fidelity, but from the time of its administration the patient began to fail ; still, the medicine was continued faithfully and regularly, but in spite of its infallibility the patient died within twenty-four hours.

CASE II.—December 21, 1889, I was called by Dr. E. R. Bennett to operate upon a patient with diphtheritic

croup, but upon arrival found the child dead. Dr. Bennett has kindly given me the following history:

"Ida R., aged two years and two months, had always been considered delicate by the parents. Had pharyngeal diphtheria six weeks before, and recovered. Was called to attend her last illness December 19, 1889. History given was a slight fever, very marked restlessness, a distinctly hoarse, ringing cough with no expectoration. These symptoms only existed twenty-four hours before my arrival. The difficulty of breathing increased rapidly. Inspection of fauces showed a diphtheritic deposit covering both tonsils. Diagnosis, diphtheritic croup. Prognosis, grave.

Commenced immediately the administration of the myrrh mixture as advocated. Also administered the juice of a fresh pine-apple, a teaspoonful every half hour. Inhalations of the vapor of lime were repeated at intervals, and the atmosphere of the apartment was moist constantly with the same. In spite of all medication the voice rapidly became extinct, the pulse failed, and patient expired on the 21st, three days after the onset of the disease.

In this case operative measures were postponed on account of the faith in the infallibility of the treatment. I have since learned that subsequently another child in the same family was taken with the disease and was in an alarming condition, but have not been informed as to the result.

It may be said that no conclusions can be drawn from the report of two cases. Two fatal cases, however, are sufficient to destroy the reputation of any line of treatment for infallibility.

In conclusion, I would again repeat that we have no specific for diphtheria, and would insist upon still clinging to old and well established methods of treatment. The frequent use of iron in full doses, free stimulation, abundance of nourishment, watchful care, antiseptic gargles and washes for the throat and nose, strychnia and digitalis in case of depression, and the bichloride of mercury when the larynx becomes invaded—these remedies are our sheet-anchors in the treatment of diphtheria, and no specific remedy can displace them; while isolation, ventilation, and disinfection are safeguards that should never, never, be omitted.—*Atlantic Medical and Surgical Journal*.

Salol in the Gastro-Intestinal Derangements of Children.

BY WALTER LESTER CARR, M.D.

WITH the increased knowledge of the part the micro-organisms take in the origin of disease, our attention has been directed to the treatment of morbid conditions by agents that will destroy these low forms of life, or at least interfere with their development and growth. The anti-septics that are used in surgical procedures have been given trials by internal administration, and some of them have earned a permanent place in the treatment of diseases of bacteriological origin, as witness the administration of corrosive sublimate in diphtheria and of creasote in tuberculosis of the lungs.

More recently the condition of the alimentary tract in certain forms of catarrh has seemed to indicate, from our present view of the causation of these disorders of digestion, a trial of agents that will prevent the activity of micro-organisms. The advent of the synthetical drugs, especially of the carbolic acid series, has given an impetus to the treatment of disturbances of the alimentary canal sufficient to place us on a plane beyond that which we occupied when an opiate was considered the only drug to be used in a diarrhœa.

Physiological knowledge and pathological investigation are leading the way in the furtherance of a more advanced and scientific treatment of disease, and while every new drug does not deserve a place in the pharmacopœia, it at least merits our attention if its use produce any good effects. With the approach of the hot weather a medicinal agent that will be of any service in relieving gastro-intestinal disturbances, especially in children, is worthy of our investigation.

Salol is one of the latest of the synthetical compounds that has been given to the profession for use in the disturbed functions of stomach and bowel caused by changes in the food, the formation of ptomaines and other products of decomposition and fermentation.

Administered by the mouth salol is probably not changed until it reaches the small intestine, where it is split up by the action of the pancreatic juice into salicylic acid and sulpho-

phenol, which are eliminated through the urine. "The production of this decomposition in the intestine will explain its value as a powerful disinfectant in intestinal affections."

Lombard makes mention of this action of the pancreatic juice on salol, and that the activity of the drug depends more on the quantity of the pancreatic juice than on the amount of the drug. He instances the fact that, if the pancreatic duct be tied and the juice be cut off from access into the intestine, the drug remains without effect. In pathological conditions, therefore, where the quantity of the pancreatic juice is increased or diminished, the physiological action of the drug will vary accordingly.

The elimination of the drug in the urine causes it to assume a brownish or a dark-brown color (carbolurine), which, upon the addition of liquor ferri sesquichloridi, changes to a violet shade. Osborne writes: "I have found ten grains to be the smallest single dose that would produce the slightest darkening of the urine, and that dose but rarely. I have obtained a distinct reaction in the urine after only one grain was taken, showing the positiveness of salol breaking up in the intestine into its constituents and distributing its salicylic acid through the organism."

The experiments made with salol in cultivation broths have led Dujardin-Beaumetz and others to declare that salol is not an antiseptic, but it is probable that the negative results shown by salol in preventing bacterial development in tests are due to the insolubility and inertness of the drug unless broken up into its constituents. The clinical value of salol in intestinal disorders appears to be uncertain, as observers are not agreed as to the effects obtained. Osborne thinks that in twenty-two cases in which he gave the drug he did not have a single failure. McCall used it with success in a severe case of colitis, with bloody, mucous stools. Vansant reports eleven cases, two of them children, where the salol was administered, generally with bismuth, because of the gastric symptoms. All did well. Goelet writes that the diarrhoea and dysentery of children in summer are more promptly relieved by salol than by anything else. Brothers was not fortunate, for of sixteen cases, all children who afterward reported, only three were positively cured. Eichberg, after a trial of salol in various forms of intestinal troubles, but not in children, concludes that naphthaline is more efficacious in the same conditions.

During the past eighteen months the writer has made a

trial of salol in thirty-five children who have been seen at the Out-Patients Departments of Bellevue and St. Mary's Hospitals. Unfortunately, it is impossible to give exact returns of these patients, because the mothers of the children often failed to report after the first treatment. It may be assumed that they were not worse, or they would have been brought back.

The drug has been used in all the disorders of the stomach and intestine common to children, but with the most success in the cases of acute gastro-enteritis caused by improper diet or from temperature changes.

The dose and the mode of administration vary somewhat in different cases; the preference being to give the salol alone unless there is some particular reason for combining it with another agent. If the symptoms are those of acute gastro-enteritis, with the vomiting of milk, or of other food, and the movements from the bowels are ill-smelling, loose, and quite frequent, the administration of salol, while maintaining perfect rest of the stomach and bowels, will be all that is required. Should the vomited material contain bile and the stools have a lumpy, clay-like appearance, or be streaked with bile, the addition of a small quantity of calomel or of mercury and chalk will bring about a quicker relief. This may be explained, partially, by the effect of the mercurial on the obstructed ducts of the liver and pancreas.

When the movements of the bowels become frequent and the discharges serous, the effect of the salol, besides the neutralization of the disagreeable odor, seems to be almost negative. It is seldom that the watery motions are lessened by the salol unless given in combination with opium or bismuth.

In dysentery and severe colitis salol exerts very little control on the tenesmus and bloody passages. The dose of salol will depend much upon the requirements of the case. For children under six months one-half grain every two hours for two or three or four doses will be found sufficient; between the ages of six and eighteen months, half a grain to a grain and a half; two years, a grain and a half to two grains will usually be efficacious. The drug is best dispensed combined with some inert powder. Children take it readily if placed on the tongue or in a spoon. It never, so far as the writer is aware, causes toxic symptoms or any of the irritation of salicylic acid.

Abstinence from food that would continue the irritation

of the stomach is of the same importance in the employment of salol as in the treatment of all disorders of digestion in children.

The conclusions drawn after the use of salol indicate that it is an easily administered, safe drug in the first stage of acute gastro-enteritis in children, and in the more chronic forms of enterocolitis, accompanied by slimy, bad smelling evacuations. In the acute condition it is necessary to keep the stomach at rest and administer two or three doses of salol within five or six hours. For the more chronic state of catarrh it is best given in somewhat larger doses before meals. In frequent serous discharges and in colitis the salol does not produce the same good results as in the cases mentioned above, and its effect is uncertain, not being so rapid or so sure as an opiate.

In dysenteric disorders it can not be relied on. It seems, then, that salol acts best in morbid conditions due to fermentation and decomposition in the stomach and upper bowel, and that it diminishes in power as it passes through the large intestine.—*Archives of Pediatrics.*

The Clinical Significance of Albuminuria.

THE importance of a proper interpretation of albumen in the urine, not only for the purposes of medical prognosis, but especially in connection with the acceptance of life insurance risks, appeals strongly to every member of the profession. The almost universal usage of insurance examiners is, we believe, to reject albuminuric subjects, or, at least, to defer their acceptance till repeated subsequent examinations have proved the absence of the offending substance.

Yet cases are accumulating in which it is claimed recovery has ensued after a temporary or periodical occurrence of albuminuria. Many such instances are collected in the extended monograph of the late Prof. Calvin Ellis, which formed the last of his valuable clinical and pathological studies. Our English brethren, in their annual meeting at Leeds, have been considering the same subject, and their deliberations, albeit involving perhaps a "conclusion in which nothing is concluded," will have an interest for our readers.

Dr. F. W. Pavy, whose views of "cyclical albuminuria"

are sufficiently well known to the profession, opened the discussion and, as might have been expected, took the ground that albuminuria *per se* in a patient presenting, after careful examination of all his organs and functions, no other aberration than the albuminous urine, need not necessarily militate against the safety of the insurance risk. He classified the cases under three heads:

1. Those in which very small traces only are observed.
2. Those in which there is a notable quantity of albumen, and that constantly.
3. Cases of the so-called cyclical variety, where there is regularly a notable amount at one period of the day, and an absence at other periods.

The first group he considered the most favorable as to prognosis, the second least so, and the third of intermediate augury. Even in the second he thinks that some cases run on without serious results arising, but admits that our knowledge does not at present permit us to differentiate such from cases of Bright's disease. Of cyclical cases he thinks a favorable opinion may be given, as a simple medical prognosis, but where the question of life insurance is involved, suggests that an increased premium be required.

Dr. George Johnson, of the King's College Hospital, took a square issue with Dr. Pavy, and repudiated all "physiological" or "functional" albuminuria. Admitting that an albuminuric subject might have no symptoms, and might thus fall into Dr. Pavy's favorable classification, he claimed that such was merely a parallel case to that of a patient with cardiac valvular incompetence, who may live for years without any symptoms, but whose disease is not to be therefore diagnosticated as functional. The fact of the recently ascertained frequency of albuminuria he interpreted, not to show its lack of gravity, but only to indicate the necessity for universal urine testing.

Dr. Maguire said he had found disorder of the circulation in all cases of functional albuminuria. The disorder was in the direction either of increased or lowered arterial tension. The former occurred in persons having a family history of Bright's disease; the latter in persons of weak circulation, in whom the albuminuria was essentially cyclical, though the latter peculiarity might occur in Bright's disease also.

Dr. Pye-Smith believed that there was no physiological albumen, and that functional albuminuria was for the time being pathological. He compared albuminuria with hemop-

tysis, always serious, but not necessarily indicating incurable organic disease. He would defer an insurance of the albuminuric subject, rather than try to draw a distinction which was often impossible to be drawn.

Prof. W. T. Gairdner, of Glasgow, said that the occurrence of albumen after great physical or mental strain showed, not that the albuminuria was physiological, but that the strain—whether, for instance, in pedestrianism or in cramming—was unphysiological. He would, on the other hand, admit the term “functional albuminuria.” Its presence in a life insurance applicant calls for postponement.

Dr. Rabagliati interpreted albumen in the light of specific gravity. If the latter was above 1.020, it suggested beginning lithemic nephritis. If below 1.010, it meant further advance of the disease. The Scottish Widows’ Fund found the average death-age of albuminurics to be fifty-seven, and he advised considering that to be the life expectation of an albuminuric without casts or other definite lesions.

Dr. Saundby would accept for insurance “unquestionably” a case where the albumen disappeared after a period of recumbency. He would always reject a risk where there had been nephritis, and said that while he believed there were other innocuous forms of albuminuria, they were, for insurance purposes at present, speculative, and should be taken only for short periods or increased premiums.

Dr. W. J. Tyson thought the number of deaths from Bright’s disease small compared with the number of cases of albuminuria met with in practice. He lamented the popular knowledge of the usual significance of albumen, which gave patients much unnecessary anxiety and distress.

Dr. George Harley believed that the albuminuria of hepatic, cardiac, cerebral and pulmonary origin was associated with a specific gravity of over 1.015, and was thus distinguishable from the albuminuria of Bright’s disease, which, being associated with this organization of the renal tissue and retention of salts, always had a lower density of the urine.

In general, the position that albuminuria is not necessarily of grave import seemed to be taken by Drs. Pavy, Tyson, Saundby, and measurably by Dr. Drysdale; Drs. W. T. Gairdner and Eddison occupying a somewhat intermediate position—both said they looked upon albumen as a “danger signal.” The more conservative view, which distrusts all cases which have been albuminuric, was held with more or less rigidity by most of the other speakers.

The physician who looks to the Leeds discussion to clear up the question of the prognosis of albuminuria will be much disappointed. The solution to the problem requires the answer to two questions. First, Is albuminuria consistent with health? Second, If so, do we possess any means of distinguishing such cases from those in which it accompanies grave disease? The answer to the first question, which a decade of years ago would have been universally negative, is now given by an influential contingent of the profession as affirmative. The answer to the second question is not yet forthcoming.—*Boston Medical and Surgical Journal.*

Report of a Case of Epilepsy Treated with Antifebrin.

BY EDWARD L. BEAL, M.D., OF REPUBLIC, MO.

Read before the Southwest Missouri Medical Association, Springfield, Mo., October 10th and 11th, 1889.

I. R., æt. 54, came to my office on May 18, 1889, complaining of severe continuous headache, pain in the back of the neck and back, of three weeks' duration. His expression and general appearance was that of a man who had suffered a great deal of pain. He was nervous, somewhat emaciated, poor appetite, poor digestion, and generally run down. He also gave me the history of epileptic convulsions occurring from two to three times a week since childhood. He had, of course, tried several doctors, and a goodly quantity of nostrums in colored wrappers, with a varying degree of success. The most relief he had ever experienced was a suspension of the attacks for about four weeks under the bromide treatment. He had had something of veratrum, and he wanted some instruction as to the proper dose and dangers of it, and expressed an eagerness to try it for the "fits." So, on general principles, I prescribed for him a mixture of pepsin, phosphoric acid and iron, with veratrum and valerian added. For his headache and backache I prescribed thirty-six powders, each of which contained gr. iv of antifebrin, gr. iij of quinine and gr. $\frac{1}{2}$ of morphine; one to be taken every three hours until better, then one three times a day until it was entirely gone. He reported in a few days that his headache, etc., were entirely gone; but I told him to take all the remaining powders as directed,

which he did; when his mixture was gone, he came back and had it refilled.

I prescribed for him for the first time on the 18th day of May. On the 3d day of July he had the first convulsion since the 17th day of May, a suspension of forty-six days. On the 5th he had another and on the 9th still another convulsion. On the 10th he came back for a fresh supply of the powders, for he had concluded that it was the powders that had stopped the attacks. I then, on the 10th of July, put him on a six weeks' treatment of antifebrin, gr. $2\frac{1}{2}$, quinine gr. $1\frac{1}{2}$, three times a day, determined to make a more complete test of its value. I saw him last Monday, October 7th, which was eighty-eight days since he had his last convolution. His general appearance is much improved. His actions show that he has more confidence in himself, and he thinks that at last he has found in antifebrin, or in "them powders," as he calls them, a veritable talisman; to him a true "elixir of happiness," if not of "life."

Now, there is one point especially to which I want to call attention; that is, that these powders in some way had an influence on the attacks. True, he was taking this tonic with veratrum all the time, and he is still taking that in smaller doses; but while he was taking that steadily and continuously, the powders having been suspended, the attacks returned, and when the administration of them began the second time, they were promptly suspended; just how long this suspension will last I can not tell. If they do return (they had not returned on November 1st), I shall promptly go back to antifebrin and quinine.

I do not know if this is a general custom, but I prefer, on general principles, to administer antifebrin in conjunction with such a tonic as quinine. This prolonged administration has been attended by none save good results. The effect on the convulsions, in the first place, was purely a matter of accident to me; for, while I had heard of antifebrin for epilepsy, I had no thought of that particular result when I first prescribed it to this patient. It was *given* for his rheumatic neuralgia. I may say further that for headache, especially of rheumatic or neuralgic character, I have found in antifebrin a valuable agent, often giving prompt relief when antipyrine had failed. I *never* use it as an antipyretic; my observation is that it is a dangerous agent. I think I have recently seen death produced by 8 gr. doses given by a brother practitioner for hyperpyrexia.

If I want temperature reduction, I rely on other remedies and use other means.

There is only one way in which I ever use it in pyrexia at all, and that is one or two grains each of antifebrin and Dover's powder, given every two hours until sweating occurs. It is a valuable remedy, but in fevers I think its use should be greatly restricted, if not abandoned, and especially in large doses. With a normal temperature a large amount may be given without bad effect. I have myself taken within three hours 45 grains for sick headache, with prompt relief of the headache. Beyond slight cyanosis, no bad effects were occasioned. I have never given any one else so much, and before I give any quantity I take the temperature. It is not my intention, however, to speak extensively on the subject of antifebrin, only so far as it has any reference to the case under consideration. I shall watch this case very carefully, and I hope to be able to give you a more conclusive report at our next meeting, six months from to-day.

—*College and Clinic Record.*

Polioencephalitis (Spastic Infantile Hemiplegia of Benedikt)

BY C. E. RIGGS.

BERTHA K. came to my clinic January 18, 1890. American born of German parentage, two and one half years old, no neurotic tendency on mother's side, both mother's parents living and well; the father's father died of apoplexy, his mother of cancer of the stomach; the patient had measles in January previous to present trouble; in other respects she has been entirely well.

On July 8, 1889, (at the age of two years), patient was taken suddenly with staggering gait, and in a few hours was seized with convulsions, loss of motion in right arm and leg and loss of speech (before this attack she was learning very rapidly to talk). The convulsions lasted for three days, during which time the face was pale and cold, eyes constantly closed, but the child could swallow a small quantity of milk when offered; on the fourth day the convulsions became intermittent (at this time she is said to have had fever), and occurred at irregular intervals for three months.

While there has been no athetosis or hemichorea, yet the

right hand has been clenched until very recently; sensation was impaired in the right side. After she had sufficiently recovered to walk, her gait being that of a hemiplegic, she was taken with epileptiform attacks, falling forward on her face if not caught, but immediately coming to herself after the manner of minor epilepsy.

This disease occurs usually in children between one and four years of age. A child previously healthy is suddenly taken ill, showing grave cerebral symptoms; stupor and convulsions are very frequent; this condition may last from a few days to a few weeks, when the acute symptoms subside, but the child remains more or less paralyzed, and from this paralysis it never entirely recovers.

The cranial nerves are seldom involved, yet in a case described by my friend Dr. Fry, of St. Louis, the facial nerve was markedly affected. Strumpell tells us that it is not unusual for epilepsy to be subsequently developed as it has been in this patient. The child seems to be fairly bright, but makes no effort to talk. Many of these patients are said to be more or less demented and lacking in moral sense. "This condition reminds one forcibly," says Strumpell, "of the acute poliomyelitis of children, with a difference merely in the localization of the disturbance, and it is not impossible that the two diseases have a similar if not an identical etiology; the process is probably in most of the cases more or less completely limited to the motor regions of the cortex."

According to this author, precisely similar phenomena may be observed in children recovering from measles, scarlet fever and other acute infectious diseases. At the beginning of the attack the treatment should be the same as in the acute stage of poliomyelitis. The recession of the paralysis which has taken place is probably due to the disappearance of the congestion in and around the inflamed cortical area, while the paralysis that remains will be permanent because of the absolute destruction of motor cells (upon which the inflammatory process has spent its force), which art can not regenerate.

The best remedy for this condition is electricity, massage and cold sponging followed by vigorous friction. Bromide of potassium in large doses is said to be very beneficial for the epileptic attacks, although in my little patient it seems to have been anything but helpful.—*North Western Lancet.*

Treatment of Hæmorrhoids.

BY W. P. AGNEW, M.D., SAN FRANCISCO, CAL.

IN consequence of imperfection, bungling and charlatanism on one hand, and prejudice, misunderstanding and lack of investigation on the other, the best method for the radical cure of hæmorrhoids is a question that still interests the inexperienced progressive class of the medical profession, as well as personally the sufferer himself, and is not receiving the attention generally that it justly merits.

There is a class of medical men who seem content with their present state of information on this subject—advocates of either the knife, ligature or cautery operations. Some of these men are occupying positions of authority, and have an influence to mould the opinions of those who are quite willing to accept their views without further investigation.

The writer does not happen to belong to the latter class, preferring to take no one's *ipse dixit* where there is a diversity of opinion and in a matter so easily demonstrated.

Should there be no means other than a choice of one of the more heroic plans taught and recommended by college professors and authors on rectal diseases, it seems apparent to the ordinary reasoner that the clamp and cautery operation has the decided preference, unless a severe secondary hæmorrhage should call for the "ligature," in which event they all share alike.

In some parts of the medical world there appears to be something of a spirited discussion going on concerning the relative merits of these so-called more scientific methods of cure; which discussion reminds me of a fight among barbarians, and for the sake of suffering humanity they should be let alone and allowed to completely annihilate each other. Here is some of their language: "That Mr. Whitehead's operation is so self-evidently 'bloody, tedious and difficult,' that no general practitioner and few specialists will care to undertake it. No amount of assertion by Mr. Whitehead in favor of its simplicity will deceive any one who has studied anatomy."

Not being immediately interested in the success of Mr. Whitehead's fight, nor in direct sympathy with his opponents, we will make no attempt at argument either pro or con, but content ourselves with the question that naturally suggests itself: Is there, or is there not, any means for the per-

manent cure of hæmorrhoids, outside of the painful operations alluded to, that does not require the use of anæsthesia or an assistant, equally as effective, more simple and safe, and certain in its results? We unhesitatingly answer, that we have in the injection of carbolic acid of sufficient strength, carried in a suitable excipient and properly applied, such means.

Dr. F. K. Haynes, Los Angeles, Cal., says: "I have frequently made Allingham's ligature operation. It is easy and effectual, but followed by retention of urine and great pain, lasting in some cases seven days. One of my cases died from lockjaw, and a similar result followed in a case in the Episcopal Hospital, of Philadelphia. The great objection to this and other operations is that they are operations involving the use of ether and rest in bed. Do we possess in carbolic acid a safe, speedy and a painless cure for hæmorrhoids?

Dr. Geo. F. Monroe, in *Medical Journal*, says: "Out of two thousand cases of hæmorrhoids that I have successfully treated by the injection process, only two cases of extensive sloughing occurred and these in syphilitic subjects. There were six cases of easily controlled secondary hæmorrhage. Several cases suffered more than was agreeable when the tumor was not thoroughly injected. The treatment, in my opinion, is a safe one and yields excellent results."

Dr. W. I. Kelley, Cincinnati, Ohio, in answer to the question, Is there any danger of producing embolism by making hypodermic injections into hæmorrhoids? says: "I have made several thousand such injections and emphatically say no! Sometimes a large vein is seen in a hæmorrhoid, and if such exists, by no means stick the needle into it (the vein), as that might produce embolism."

Dr. Chas. B. Kelsey, New York, author and specialist, says: "I do not consider the operation by injection as dangerous to life. Originating, as it did, among quacks, its adoption by the profession has been followed by accidents which generally attend a new remedy before its application is fully understood."

With these self-made statements before him, Dr. Kelsey has not only been instrumental in creating a great prejudice against, but has shown his utter inability to apply this greatly superior and strictly scientific method. He directs five drops of a solution of carbolic acid in glycerine and water, with a

preference for the weaker solutions, injected into the center of the tumor, (regardless of size), and speaks of injecting five drops in a tumor as large a hen's egg, and then says he never could tell previously when a tumor would slough or contract. It would seem that a representative man and an authority on rectal diseases, after having a brilliant success in one instance and a struggle in another, would possess enough ingenuity to ferret out the cause of these unexplained irregularities. The small quantity of five drops in a large haemorrhoid would only serve to act under some circumstances as a foreign body or a local irritant, producing a central slough or a slow breaking down of the disturbed growth; under other conditions a contraction would result. I would inject from thirty-five to forty minims in a large tumor, possible more, of a solution of not less than fifty per cent. of pure carbolic acid. I can not conceive of the acid being too strong, provided you can stop its action at the desired point. A weak solution is much more liable to diffuse itself, or be absorbed and carried into the circulation like a hypodermic of morphia, than a strong solution which acts as a cauterant, destroying the tissue and strangulating the circulation at once.

It might here be stated that the theory of cure of the injection process is by strangulating the circulation, the same in effect as a ligature, with the advantages of the local anaesthetic, antiphlogistic and antiseptic properties of carbolic acid. The base of attachment heals, while the dead tissue which is rendered non-inflammatory and antiseptic, disintegrates and is thrown off—a process that fortifies against secondary haemorrhage. It is reported that carbolic acid is superseding iodine, etc., for radical cure of hydrocele. "The chief claims are the certainty of its action, entire freedom from pain and wild inflammatory action." Also rupture cured by hypodermic injections in and about the ring, exciting adhesive inflammation, by advertising specialists.

There is one thing certain, that as long as college professors, writers and the profession generally, hold out in favor of heroic measures against milder yet effective means of cure, when the contrast and results are so apparent, because the latter appears less scientific and some of the leading lights have investigated in their way and pronounced against it, just that long will the itinerant and advertising

doctor thrive at the expense and discomfiture of the regularly educated and ethical physician.

The following extract from a letter of inquiry, that I received, might be considered as a sample of many others: "An old itinerant, who never studied medicine at all, treats all in this vicinity by the injection process, and with good success. I am practicing here, and if I could treat piles successfully it would assist me greatly."

If an itinerant, who is ignorant of anatomy and the nature and properties of drugs, has success, (which by the way I know they have,) could not an educated and resident physician, to whom the people will most usually apply first, do equally as well and thus forestall and work out itineracy?

Dr. S. S. Turner, acting assistant surgeon U. S. Army, says: "No fact is better known to the profession than that nearly all men, doctors not excepted, will suffer more than the pain and inconvenience of a thousand operations, rather than undergo an operation for removal by any of the methods in vogue. The fame of some specialist who is distant enough to 'lend enchantment to the view,' will generally induce people of large means, when life has become something of a burden, to place themselves under his care and take what he offers. But, unfortunately, piles are by no means limited to people of large means. The greatest number of sufferers must take what the general practitioner can give, and will not take the cutting or crushing operations until compelled by dire necessity, and are only too glad of a less heroic alternative which offers them hope of relief.

"For this body of sufferers the operation by carbolic acid injection offers a means of relief to which they will readily submit. In a sufficient number and variety of cases to justify me having an opinion upon the question of its merits, I have never met with anything which I have regretted."
—*North American Practitioner.*

Syphilitic Gummata of the Brain.

BY ARTHUR BENNETT, M.D., DETROIT, MICHIGAN.

IN preparing this paper I did not deem it necessary to lay much stress on the pathology, but have directed my attention more especially to the cause, history, diagnosis and treatment of syphilitic gummata of the brain. I specify

brain because I wish it understood that these gummous tumors, or as Wagner calls them, "syphiloma," have been found and described in most every viscera of the body.

(1.) We will consider the cause. It is pretty well agreed upon that the cause is due to "syphilitic virus" taken into the system, either acquired or hereditary. Though the mode of action of the poison in the system is not definitely known, there have been several interesting theories concerning it. Saulsbury thinks it acts by means of a fungus in the blood produced by a germ or bacterium. He says that he found this fungus and named it the "crypta syphilitica," but no one else, I believe, can verify this statement. Desp s asserts that syphilis is due to a "purulent diathesis," but syphilis proves to be the least purulent disease; indeed, in the initial lesion there is never any pus. Others assert it has its origin in the blood, and call it a "blood disease," with some show of truth. Mr. Hutchinson, of London, would have us believe that syphilis is a specific fever, and that the tertiary stage in which the gummous tumors appear is only a sequela, and that tertiary is a misnomer; thus, if this be true, we have no third stage, and the complications, as Mr. Hutchinson would call them, are not specific but are non-specific tissue changes, due as in the fevers, to the acute inflammation. Now, I think the stage in which the gumma occurs is just as much a stage of the disease as the primary and secondary periods; though this may be debatable; in other words, the third stage of the gummata is only a late expression of the diathesis of syphilis. I think the gummata of the brain are due to the *migration of the proliferated cells*, say from the lymphatics or initial lesion, by means of the blood, to the connective tissue of the brain or tissues surrounding the brain. This causes inflammatory new formation, and we have the nucleus of a gummy tumor or infiltration. These cells afterward undergo atrophy and degeneration until at last we have the true tumor of the consistence of gum.

(2.) We will say something now about the general history of the gumma. (By the way, this name was given to the condition by Virchow.) You will understand from what has been said, that syphilis in the main is a disease of the connective tissue, and not of the blood or lymphatics, though they enter into the disease by transmission. After these cells have been deposited in or around the brain tissue, they may manifest themselves by

symptoms as early as the sixth month or as late as the twentieth year. The infiltration does not primarily take place in the nervous tissue, but begins in the surrounding structures, involving nerve tissue secondarily; an instance of this may be shown in syphilis of the meninges or bones inducing softening and infiltration of the brain. Syphilis is known to attack the brain more frequently than the spinal cord. Our knowledge as to the parts of the brain affected is gained from the symptoms produced by the diseased portions; that is, we know the physiological function of the medulla is to govern respiration, to dilate the pupil of the eye, to control the muscles of chewing and swallowing, etc., and that the cerebrum has the power of spontaneity and perception; so with every portion of the brain, they have been studied anatomically, physiologically, and pathologically, and as the various parts are impinged upon by tumors, *et cetera*, there will be a corresponding loss of action of body controlled by the diseased brain. Those people who are most liable to suffer from gummata and nervous symptoms of syphilis are those with neuropathic constitution: chorea, migraine, apoplexy, melancholia and neuralgia are common features in the family history of those suffering from syphilitic trouble of the brain.

(3.) Symptoms. As there is so much written on the subject of syphilitic nervous affections, and gummatous tumors and infiltration is generally the result, it becomes rather difficult to tabulate a set of symptoms that will insure the average physician of a *positive diagnosis* as to the *exact seat* of the disease in the brain or cord, though the symptoms to eliminate other diseases of the brain from syphilis are quite distinct. Thus we only have to take into account, age, history, and course of the disease, to arrive at a diagnosis of syphilis of the brain. If a patient comes to us with a history of syphilis of several years' standing, with epilepsy, with irregularities of speech, with atrophy of any muscular tissue, with sensations of melancholia, with sudden loss of perceptions, with aches in the bones, and if he is of age with the major portion of the above symptoms, we may be sure his brain is affected from syphilis. Now, if we wished to distinguish between simple epilepsy and specific, we would take into account: (1) history, (2) paroxysmal headache, (3) frequency of mental disturbance, (4) frequent co-existence of optic neuritis, hemiplegia, aphasia, and paralysis of various nerves, (5) age of the patient, (6) result

of treatment. (7) has the patient received any injury? Simple epilepsy occurs usually before puberty, while specific after; simple is aggravated by potassium iodide, specific is helped. Thus we could proceed with the symptoms and differential diagnosis, but it is not necessary.

Before epitomizing the treatment, I shall refer to a case which I diagnosed syphilitic gummata of the brain and cord.

H. S. applied to me for treatment in the last of May, 1888. He is a man forty years old, a printer by trade. He has been married twice. During the lapse of time between his first marriage and his second he acquired reckless habits and contracted syphilis. He has one child by his first wife, which shows no signs of the disease. He states positively that he was a healthy man until the time of contracting syphilis, which is now about seven years ago. He received some treatment at the time, but does not know the nature of the medicine he took, and never had any extended course of treatment at any one time. Some years ago he experienced a loss of power of the muscles of his mouth and tongue, and found great difficulty in talking and spitting, or as the patient puts it, in *quilting*. He has never, as he recollects, broken out with any secondary cutaneous symptoms. About eight months ago he was at his work, when all at once he was seized with an epileptic fit. He was taken to his home, and soon revived from the fit, but found that he was unable to fix his mind clearly on any subject for any length of time. Thus he could not read or think well. He had dizzy spells and loss of speech for some seconds. Some time after this he commenced work again, when it was found he could not use his right hand well in picking up the type, and his head symptoms still bothered him; so he applied to a homœopath of this city for treatment, who told him he had a slight nervous attack which he would soon get over, and gave him a bottle of medicine which I think was *nux vomica*, but he still occasionally had a fit, and his memory was getting worse. He even got so he could not be trusted out alone, as he would get muddled for hours, in the streets, or have a fit; so, not being satisfied with the progress made with the homœopath, he came to me, when I solicited the above history from him. I found his present condition not so bad. His vision was $\frac{2}{20}$, but at times he had dizzy spells, and could not see or speak for some seconds. I found the muscles of the right thumb on

the palmar surface completely atrophied. He said he had never had fits until the one mentioned about eight months ago. His heart and lungs were in good condition and his general health good. I diagnosed some specific trouble of the brain and placed him on potassium iodide, potassium bromide, and syrup, in following compound: five grain doses of each to be repeated four times daily, and to increase the dose one-half at the end of each three ounce bottle; he took one-half dozen bottles and I thought appeared better. His eye symptoms and memory seemed improved, and he had not had a fit since the treatment began; but on July 10th I was sent for, when I found the patient in bed. With a vague look he informed me that he did not feel bad in any particular place, but a fear had seized him, and he thought he was going to die. I dissuaded him, and ordered a larger dose of the iodide. On the 14th I was called again, and the patient, I was informed, had nine fits during the day. I ordered amyl nitrate for him to inhale, and nitroglycerine to take internally, one one-hundredth grain, three times daily. I called next morning and found that the medicine had no effect, but the patient's fits had been much more frequent, indeed one fit every fifteen minutes; his power of speech was gone, the muscles of his mouth and throat were lax, and the saliva was trickling from his mouth; he could not even swallow. I procured an electric battery and endeavored to stimulate the muscles, but was unable to do so. I ordered the medicine to be poured down him, but this could not be accomplished without choking him. Still his fits came on every fifteen minutes. By the way, these fits were of the *petit mal*, rather than the *grand mal*, and the loss of consciousness was not more than three or four minutes, when the patient came to and exercised the keenest feelings. He would cry and try to talk, making a sight indeed pitiable to look at. I told his friends that I would like to have a consultation with another doctor, when Dr. Jennings was called in, and the following mode of treatment was fixed upon: We must feed him with a stomach tube. A soft rubber tube was procured and the patient was given a pint of milk through the tube.

In this milk was dissolved—

B.
By. Potassii iodidi,
Potassii bromidi,
Sig. Repeat four times daily. aa 3ss.

His fits, in the course of seventy-two hours, were much less severe and fewer in number, until on the fourth day he only had three fits, and in nine days' time he ceased having fits at all. His speech began to return, and now he can talk, walk, think and eat, as well as any man; and if it were not for the atrophy of the muscles of the thumb, he could ply his work as usual. So much for the stomach tube and iodide of potassium.

Some writers claim that syphilis can not be cured, but I am now ready to disagree with them. When we have such a powerful antidote for the gummosus tumor, I think it possible that the disease may be cured in any form. In the treatment a potent influence in lessening the severity of the disease is found in our improved methods. Within the past dozen years great advances have been made in the therapeutics of this disease. Many errors have been eliminated and new principles have been established on a more correct basis. Mercury is not now given until ptylism is produced in the extreme, and the bones of the body are saturated with even pounds of the metal. Happily the age of chivalry is gone in this respect. By the judicious use and combination of mercury and potassium iodide, even in those whose constitutions are not very good, the disease may be cured; if we may be allowed to assume a person cured who for years presents no signs of the disease and propagates healthy children. Now, in healing a gum tumor in the earlier stages of infiltration, it may all at once disappear and the symptoms suddenly disappear also. This may not altogether be due to the treatment, but to a fatty degeneration which takes place in the specific cells, and the potency of the disease is lost.

Some argue that troubles of the brain due to syphilis will run themselves out in time, but the surest way to get rid of the trouble is a course of prolonged treatment as laid down by Bumstead and Taylor's excellent work on "Venereal Diseases." There must be no half-way measures. A fraction of a grain of corrosive sublimate or three grain doses of potassium iodide administered three times daily would do no more good than would the water in which they are dissolved. If the patient's life is to be saved, heroic doses of potassium iodide are to be employed. Start with one-half drachm, to repeat four times daily, until symptoms have ameliorated, then gradually decrease the dose. Keep the medicine up long after the symptoms have subsided.

Hoping my efforts and limited experience have proved interesting to the Society, I thank you for your kind attention.

DISCUSSION.

Dr. Inglis in opening the discussion said: The paper of Dr. Bennett is of much value and interest, inasmuch as it shows the curability of a state of the nervous system, giving rise to a group of symptoms of threatening gravity.

It seems, certainly, from the description given, that, had energetic treatment not been carried out, the case would have probably progressed rapidly from bad to worse, whereas very evident improvement followed the line of treatment pursued. Such cases are eminently instructive.

As to the precise nature of the lesion and its location, there are several points which admit of further discussion.

The group of symptoms embraces a varied series of signs—signs of affection of areas distinctly separate from each other.

For instance, the atrophy of the ball of the thumb certainly does not indicate a lesion in the cerebrum, nor within the cranium. The atrophy may be due to a lesion in the cervical cord, in the nerve between the cord and the thumb, or be an essential affection of the thumb muscles.

The next group of symptoms, including the various affections of tongue, deglutition and phonation, is essentially that of a bulbar paralysis. Whatever the nature of the lesion, its location is clearly different from that giving rise to the muscular atrophy in the thumb.

The third group, including the metal disturbances, points again to another and widely separated area.

The convulsions might be attributed to either abnormal cortical discharges or to bulbar disturbance.

It would seem, from these considerations, that a single deposit of syphilitic gumma would fail to account for the phenomena.

Again the question arises, Are we safe in assuming the lesion to be syphilitic? Granting the history of the case to establish the fact of old syphilitic infection, the main support of the theory that the present affection is syphilitic lies in the efficacy of the potassium iodide treatment. We are to bear in mind, however, that the man's occupation renders lead poisoning by no means improbable. The absence of the blue line from the gums does by no means bar out this

possibility. When present the blue line is a valuable diagnostic aid, but it may be entirely absent and yet lead intoxication be going on. The blue line is an accident, not a necessity.

The efficacy of the potassium iodide treatment of lead poisoning is also well established—indeed, is rightly considered as the recognized treatment, and might here also account for the rapid improvement. The nervous symptoms of lead intoxication tally very closely with those presented by the patient—convulsions, mental derangement, paralysis of varying location and isolated muscular atrophies—these are all effects produced by the wide-spread influence of the poison on the nervous elements. The case, besides its value as a testimony to the necessity and value of thorough medicinal treatment, is eminently suggestive, for it shows that marked interference with function in various parts of the nervous apparatus is not necessarily of bad prognostic omen—cells and nerve fibres have a strong tendency to recuperation. Perseverance would conquer paralysis and atrophies which sometimes, seeming hopeless, are too early half treated or abandoned altogether.

Dr. Carrier said there were many lines of thought the paper had suggested. It had been stated that the gummata begin as early as six months. Some began earlier. We find the behavior of the gummata very different in early years of life. In these cases, although tertiary syphilis was usually held to be non-transmissible, he thought the disease was hereditary. A gumma may be present for some time, and yet no symptom occur, until a certain size had been reached. He recalled one unusual case where the cerebral symptoms manifested themselves five weeks after the initial lesion. A cure had been effected by inunctions.

Dr. T. A. McGraw said that in his experience the patients most likely to be affected with cerebral syphilis were those in whom nothing had been noticed save the initial lesion and perhaps a slight roseola. In doubtful cases, where a complete history can not be procured, he always suspected syphilis between the ages of puberty and fifty-five. He had seen many cases of obstinate syphilitic affections on whom he had given iodide of potash in drachm doses without any effect.

Dr. Eugene Smith remarked that by far the largest number of cases of paralysis of the ocular muscles were of specific

origin. The sooner a patient is brought under the influence of iodide of potash, the more likely is the remedy to be successful. Long-standing cases were usually not influenced by it.

Dr. Mulheron thought that if the diagnosis in the case was correct, it was one which was unique. The doctor was to be congratulated on the success of his treatment.

Dr. Flintermann alluded to unilateral dilatation of the pupils as one of the most characteristic symptoms of cerebral syphilis. There are many cases of syphilis where treatment seems of no avail. A friend of his, while dissecting a cadaver, where death had been due to syphilis, had inoculated himself, and become blind and paralyzed; and while he had been under treatment by the most celebrated physicians of Europe, no cure had ever been effected. Very often success was attained by following the line of treatment pursued by Branheim, of Aachen, where, in addition to large quantities of the mineral water, inunction is largely used. The doctor quoted cases which had responded very favorably to treatment by inunction.

Dr. Jennings said that he had been in consultation on the case reported this evening. In regard to the diagnosis, he found the patient suffering from bulbar paralysis, and in addition he had the symptoms of epilepsy.

Dr. Carstens considered the division between the secondary and tertiary periods arbitrary, and sometimes misleading. We ought to remember that syphilis was one disease throughout. He often thought that the good effect of the iodide of potash depended upon the previous administration of mercury—the effect of the former being to liberate the mercury. He quite coincided with the manner of treatment advocated by Dr. Flintermann. The hypodermic method of administration was to be commended in conditions where the patient was comatose.

Dr. A. Bennett said that, reviewing the question of diagnosis, he thought that there was little ground for doubt that, with a clear and definite history of syphilis, this was the cause of the trouble. There was no blue line indicating lead poisoning. Some of the symptoms were exceptional. But there is one point that is still imperfectly explained: why any permanent tumor should cause spasmodic symptoms.

Adjourned.

F. W. MANN, M.D., Secretary.

Translations

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illoway,
Cincinnati, Ohio.

SALVINE, A NEW VEHICLE.

SALVINE is a clear, yellowish liquid of oleaginous consistency, which can be employed in the preparation of pomades and ointments.

It dissolves of naphthol ten per cent., of salol and creasote fifteen per cent., phenic acid forty per cent., cantharidine alizarine, chrysophanic acid, camphor, etc.; it forms combinations with the metallic solutions; it mixes with ether, with chloroform, with sulphide of carbon, with benzine, with terpinol, with the volatile oils; these mixtures form an emulsion with water.

It has the faculty of traversing easily animal or vegetable membranes; it is therefore readily absorbed by the skin.

Prof. Kobert has found that salvine injected hypodermically dissolved the red globules of the blood of mammiferæ, which would prove this body to possess considerable toxic power. A solution like this:

Naphthol,	.	.	.	:	10 grms.
Salvine,	.	.	.	.	90 grms.
Aq.,	.	.	.	.	1000 grms.

may prove strongly toxic if applied to the denuded mucous membrane.

This is the agent which M. Berlioz recently presented to the therapeutical society, under the name of sulforicinic acid.

PHENEDINE.

Phenedine is an article of French manufacture, made by Messrs. Poirrier and Dalsace. It is an analgesic antithermic which has the advantage over antipyrine of acting in much smaller doses.

By reason of the almost complete insolubility of the drug in water, it is administered in wafers to adults, and to children well rubbed up with sugar. It has neither taste nor odor. As an *antipyretic*, it is given in doses of 0.5 to 0.6 decigrams twice a day, or one gramme once per day.

For infants the dose may be 0.2—0.3 decigrams once a day.

A case is cited of an infant two and a half years of age, sick with pneumonia, in whom a dose of thirty centigrams reduced the temperature from 102° F. to 96°.

As an analgesic, Gueorguiewski has given it successfully in one dose of sixty centigrams per day; in *headaches*, *hemicrania* or *migraine*, for the *neuralgias of the fifth pair*, in *sciatica*, and the *fulgurating pains of ataxics*.

If the one dose did not suffice, a second like it could be given one hour after the first.

CONUTILLO (EPHEDRA TRIFURCA).

The natives of Texas, like those of Europe, employ this plant in the form of decoction, infusion or fluid extract, in the treatment of blennorrhagia, of leucorrhea, and as a dressing for wounds. But it is more especially as a remedy for gonorrhœa that the fluid extract is in great repute; it is even said that taken in doses of about ten grammes per day it will cure in three days.

Moreover the various species of ephedra are very much used in medicine. The *ephedra flava* as an astringent in China, the *ephedra antisiphilitica* (in the southern part of the United States and in Mexico) as an antisiphilitic, *ephedra monostachia* (in Hungary, Bessarabia, etc.,) for gout (it is said to possess some narcotic properties), *ephedra fragilis* (on the island of Crete) as an astringent (for hemorrhoids), *ephedra distachia* (in Japan) for diarrhoea. The parts principally used are the leaves or the branches with the very small leaves in the form of scales. It is only very rarely that the fruit is used.—*Nouv. Remed.*, Nov. 8, 1889.

BROMIDE OF ETHYL AS A SURGICAL ANÆSTHETIC.

D. M. Cheifety has convinced himself that the pure bromide of ethyl, prepared according to the French method: bromide of potass., alcohol, sulphuric acid, does not present the least danger. He has employed it in two hundred and fifty dental operations, and has never observed any unpleasant secondary phenomena, except in four cases wherein he used a bromide of ethyl not sufficiently pure. He pours the bromide upon an *Esmarch* mask (used for chloroforming) which he applies hermetically to the face. The extraction ensues 2—3 minutes after the application of the mask. Many of the patients do not lose consciousness,

open the mouth, etc., but in all cases no pain is felt during the process of extraction. It results from these observations that bromide of ethyl is more an analgesic than an anaesthetic properly so-called. The author has also used it with success in two cases of ingrowing toe-nail, to open a paronychia, and to make painless the incision in a periproctitis.—(*Nouv. R.*, Jan. 8, 1890).—*Journal d. M. de Paris.*

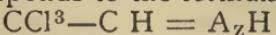
CHLORALIMIDE.

Note by Choay.

The year previous, Nesbit having proposed to introduce into therapeutics *ammonia-chloral*, I was called upon to produce this article in the chloral factory of Tournier. This manipulation requires some care: in fact, if the elevation of temperature produced by the action of the ammonia gas upon the chloral be not avoided, we get no ammonia-chloral, but instead thereof chloroform and formamide; however, the decomposition is not limited to these two bodies.

On the other hand, ammonia-chloral prepared under the best conditions, ends by becoming yellow, especially in summer, and deliquescent. Numerous reactions have sprung up and given rise to a certain number of derivations which I am at present engaged in studying in collaboration with my friend, Prof. Behal, of the school of pharmacy.

In two successive communications to the Chemical Society and in a more recent one to the Academy of Sciences, we have signalized the existence, and established the constitution of *chloralimide* and of *didehydrotrichlorodioxypiperazine*. It is the first of these substances which we present to-day. *Chloralimide* corresponds to the formula:



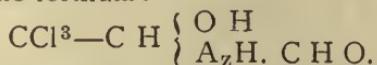
It is a colorless body, inodorous, insipid, crystallizing in long needles, fusible at 168° C . It is insoluble in water, very soluble in strong alcohol, and still more so in ether; it dissolves likewise in chloroform and in the fatty bodies.

It is not affected by light, by air or by humidity; on the contrary, it possesses a remarkable stability. It is thus that, heated in a sealed tube in presence of water, it does not undergo any change at 150° C , and an elevation of temperature of 180° C must be reached to bring about its decomposition into chloroform and formamide.

It can be split up into chloral and ammonia: thus the chloride of platinum reacts in the cold with chloralimide, giving chloral and chloroplatinate of ammonia. If it be

kept as a liquid acidulated by some mineral acid, it gives rise likewise to chloral, and to a salt of ammonia corresponding to the liquid employed.

There is another body which seems to enter into therapeutics, somewhat resembling chloralimide, and which has been improperly termed *chloralamide*. This is, in fact, a product of the addition of chloral and formiamide, corresponding to the formula :



And which according to the nomenclature of Jacobsen, could be designated by the name *chloral-formamide*. It is in reality nothing more than the formic derivative of ammonia chloral.

A certain number of combinations of this genre have been known for a long time ; such, for example, is the substance obtained with chloral and acetamide.

The use of the word *chloralimide* is especially bad ; from a chemical point of view it has no precise meaning ; the chloral which is an aldehyde, not being able in reality to give an amide. Perhaps the term might, in a strict view, be applied to the trichloracetic amide $\text{CCl}^3-\text{C O}-\text{A}_z\text{H}^2$, a different product of chloral formamide.

Can *chloralimide* be employed therapeutically ? We believe it can, if we bear in mind the examination of the products of its splitting up, and that without prejudicing in any way the physiological studies undertaken.

We are even inclined to believe that its activity will surpass that of ammonia chloral and of chloralamide ; for, at equal weight, chloralimide gives more chloroform than the others.

Moreover, *chloralimide* has not the pungent taste of ammonia-chloral nor the bitter taste of chloral amide. It has not the inconvenience of ammon. chloral of undergoing change, nor is it as unstable as chloralimide ; the solution of which should never be carried to a temperature above 60° C .

On the contrary, *chloralimide* having neither odor nor taste, can be readily taken ; and as it is very stable, we need have no fear of administering a product partially altered ; the constancy of its effects will be assured.

As to the pharmaceutic forms which can be given the drug, they are the following : powders, wafers, gelatinous pearls, pastelles, pills, elixirs ; etherial or alcoholic, chloroformic or oleaginous solutions.—*Journal de Med. de Paris.*

TREATMENT OF WHOOPING COUGH.—*Lutana.*

Ry.	Cream of Tartar,	. . . . .	ʒii
	Cocheneal,	. . . . .	grs. lxxx.
	Aq. Destill.,	. . . . .	ʒvijj.

M. Ft. S. A. A Calore, Filter.

For a child of seven years on waking and before dinner, a tablespoonful.

At 11 A.M., and on going to bed, a teaspoonful of the following mixture:

Bromiform,	. . . . .	gtta x.
Alcohol,	. . . . .	M 45.
Mucil. G. Acac.,	. . . . .	ʒiijss.

M.

If at the end of four days the nocturnal paroxysms are still as frequent, a teaspoonful can be given in the middle of the night immediately after a paroxysm.

When the weather permits, make the child take a long walk, and during its absence atomize in the room a solution of carbolic acid $\frac{1}{40}$.

Acid Carbolic Crystall.,	. . . . .	7.50 grms.
Glycerine,	. . . . .	50 grms.
Aq.,	. . . . .	250 grms.

M.

If the paroxysms are very violent add to this treatment half a teaspoonful of the syrup of codeine. But you must watch over the intestines, that they act properly.—*Ibid.*

Microscopy.Stamina.

WITH regard to certain infectious diseases to which children are especially liable, in part, doubtless, because of their greater functional activity, but chiefly because their power of resistance has not yet become sufficiently fortified—for it is well known that adults generally who have not encountered those diseases in childhood rarely contract them subsequently—the same relative immunity exists; the strong and vigorous child is much less likely to contract them than the feeble; and the convalescent, those who are particularly feeble from any one of such diseases, are well known to be the most of all liable to attack and to succumb from another. And of

pulmonary consumption, the most prevalent and the most fatal of all diseases, who does not know that enfeeblement invites it? That individuals are less and less liable to it—whether traceable to hereditary taint or otherwise—in proportion as coddling has been avoided, appetite for wholesome fat food cultivated, cold bathing habitual, protective but loose clothing worn, and exercise in the open air unrestrained? By the maintenance of these conditions all the processes of healthy organization are promoted and the constitution fortified against tubercle bacilli, as, in like manner, against other disease germs, no matter whence the quarter or at whatever age of the individual exposed; and no less against diseases not attributable to germs. And the more if we accept Metschnikoff's theory of the office of the *leucocytes* or white blood corpuscles, for these in both number and strength depend upon proper nourishment. "In health," says Kirke, "the proportion of white to red corpuscles, which, taking an average, is about 1 to 500 or 600, varies considerably, even in the course of the same day. The variations appear to depend chiefly on the amount and probably also on the kind of food taken, the number of leucocytes being very considerably increased by a meal, and diminished again on fasting. Also in young persons, during pregnancy, and after great loss of blood, there is a larger proportion of colorless blood corpuscles, which probably shows that they are more rapidly formed under these circumstances. In old age, on the other hand, their proportion is diminished."

No good observer will fail to recognize the coincidence of the condition which diminishes the proportion of leucocytes and the increased liability to disease—that of fasting; or note the no less remarkable coincidence, the diminution in the number of the leucocytes and increasing infirmity of old age. The leucocyte or colorless blood corpuscle is an *amæba*, the simplest type of a living thing; a jelly-like mass of protoplasm, of the same consistence throughout, which possesses the property of moving about and capturing its prey by changing its form by the protrusion of first one part of its body and then another, and of extemporizing a stomach by wrapping itself around any nutritive particle with which it comes in contact and digesting it. On account of this peculiar property and apparent function of the leucocytes Metschnikoff has conferred upon them the name of *phagocytes*—eaters—as expressive of their most dis-

tinctive feature, and of the process in general, *phagocytosis*.

"It has long been known," says Dr. William Osler, "that foreign bodies, such as ligatures, portions of dead bone and other substances, may be completely removed by leucocytes.

"Nowhere in the body do we have such a facility for studying the action of phagocytes as in the organs of respiration, in which, with the cilia of the bronchial mucosa, they share in the work of cleansing the air-passages; and of these two important agencies it is hard to say which plays the more important part in the expulsion of those particles of foreign matter which, in cities at least, we constantly inhale. There are several groups of cells engaged in this work: The ordinary mucus corpuscles; the alveolar epithelium; the connective tissues-elements of the pulmonary stroma, and the leucocytes of the lymph tissue in the bronchial, tracheal, mediastinal glands.

"The examination of the morning sputa of a cigarette-smoker, or of a person who has been exposed to a dusty atmosphere, shows very clearly that no small proportion of the carbon grains is included within protoplasm. The free granules are abundant, but almost every leucocyte has its little load which it has picked up on its road from the finer tubes to the trachea.

"It is possible to conceive, under certain conditions, of the air cells gradually filling, were it not for the activity of phagocytes, derived largely from the alveolar epithelium, which stands, as it were, at the gateway of the lymphatic circulation.

"In dwellers in the country, as well as in wild animals, breathing an air comparatively pure, the cilia and the phagocytes in the air-passages appear quite able to prevent access of the carbon grains to the lung tissue; whereas in the dwellers in the cities, and in animals kept in confinement, the impurities in the air are so abundant that these agents are insufficient, and sooner or later the grains penetrate the air cells.

"The steps in this process described may be followed in the lungs of any town dweller, but to see in perfection the remarkable activity of the pulmonary phagocytes, one must study the early stages of anthracosis, particularly in those exceptional cases which we see occasionally when a miner has been killed by accident or dies of acute disease. It is not, I think, too much to say that the larger part of the pigment

contained in lungs, almost, if not quite black, is enclosed in protoplasmic cells.

"A physiological process in which phagocytes play a leading rôle is the removal and disintegration of the red blood corpuscles which have lived their life and are no longer fit for work. The cells containing the red blood-corpuscles which are found in the bone marrow and in the spleen, however much opinion may differ as to their mode of origin, can not, I think, be regarded in any other light than as phagocytic elements with this definite function.

"In the mature body we have seen that in the lungs, in the intestines, and in the blood-making organs, the phagocytes have most essential functions; but the question of chief interest to-day relates, not so much to this normal process about which there has never been much doubt, as to the supposed part which these cells take in protecting the body against the invasion of parasites.

"Metschnikoff has studied a number of diseases—erysipelas, anthrax, relapsing fever, and tuberculosis—with a view of finding facts in support of this theory, and his communications within the past four years have been numerous and elaborate.

"In erysipelas the cocci are attacked first by the leucocytes filling the lymph spaces, which rapidly proliferate and actively eat the micro-organisms. Not alone do the colorless corpuscles act as phagocytes, but the fixed connective tissue cells assist in an important manner. In cases of recovery he found that behind the advancing cocci the leucocytes were crowded with parasites, which showed evidences of digestion and destruction. The connective tissue cells do not appear to attack the cocci, but are chiefly concerned with the absorption of the inflammatory exudate, even taking up the leucocytes which have died. In fatal cases there was enormous development of micrococci, the majority of which lay free in the tissues not enclosed in the phagocytes.

"As we might suppose, the views of Metschnikoff have met with sharp criticism in many quarters, and from no one more ably and at greater length than from Baumgarten. While not denying that the leucocytes eat the bacteria, he claims that the process is by no means universal, and is carried on so unequally, that we can scarcely speak of an active warfare waged against the parasites.

"Metschnikoff states that in malaria the parasites are

attacked chiefly in the spleen and the liver by the larger phagocytes existing in these organs, and to a much less extent by the leucocytes in the circulating blood.

"We see, then, in malaria very little evidence in the blood favoring a theory of phagocytosis; certainly no such campaigning on the part of the leucocytes as might be expected from the presence, in such numbers, of foes so destructive to the red corpuscles."

Dr. Osler concludes that "while phagocytosis is a widespread and important physiological process throughout the animal kingdom, and while it undoubtedly plays a most important part in many pathological conditions, the question of an active destructive warfare waged by the body cells against the micro-organisms of disease must still be considered an open one." (*Medical News.*)

Whatever may be the final verdict with regard to the antagonism of the phagocytes to disease germs generally, it appears to be clear that their proportion and their energy are in direct relation with the vigor of the organism, and dependent upon the same sustaining conditions.

Sir William R. Grove, F.R.S., the distinguished author of "Antagonism" (the subject of a lecture delivered at the Royal Institution of Great Britain, April 20, 1888), after alluding to Professor Metschnikoff's theory, says:

"Let us now consider the external life of animals. I will take as an instance, for a reason which you will soon see, the life of a wild rabbit. It is throughout its life, except when asleep (of which more presently), using exertion, cropping grass, at war with vegetables, etc. If it gets a luxuriant pasture it dies of repletion. If it gets too little it dies of inanition. To keep itself healthy it must exert itself for its food; this, and perhaps the avoiding its enemies, gives it exercise and care, brings all its organs into use, and thus it acquires its most perfect form of life. I have witnessed this effect myself, and that is the reason why I choose the rabbit as an example. An estate in Somersetshire, which I once took temporarily, was on the slope of the Mendip Hills. The rabbits on one part of it—viz., that on the hill-side, were in perfect condition, not too fat nor too thin, sleek, active and vigorous, and yielding to their antagonists—myself and family—excellent food. Those in the valley, where the pasturage was rich and luxuriant, were all diseased, most of them unfit for human food, and many lying dead on the fields. They had not to

struggle for life, their short life was miserable, and their death early; they wanted the sweet uses of adversity—that is, of antagonism.

"The same story may be told of other animals. Carnivora, beasts or birds of prey, live on weaker animals; weaker animals herd together to resist, or, by better chance of warning, to escape beasts of prey; while they, the herbivora, in their turn are destroying vegetable organisms.

"I now come to the most delicate part of my subject—viz., man (I include women, of course). Is man exempt from this continual struggle?

"It is needless to say that war is antagonism. Is not peace so also, though in a different form? It is a commonplace remark to say that the idle man is worn out by *ennui*—*i. e.*, by internal antagonism. Kingsley's 'Do-as-you-like' race—who were fed by a substance dropping from trees, who did no work, and who gradually degenerated until they became inferior to apes, and ultimately died out from having nothing to do, nothing to struggle with—is a caricature illustrative of the matter."

DUST.—Dr. Kunze, in his inaugural thesis for the M. D. degree in the University of Kiel, publishes as a contribution to the diseases caused by the inhalation of dust a series of examinations of lungs so affected. In all these dust was found microscopically, and after chemical tests in the various anatomical and histiological parts of the lungs, and in the anterior of the lymphatic vessels, numerous leucocytes were found covered with the dust. Being arrested in its progress it causes inflammation, producing hyperplasia of connective tissue, especially where a dense network of lymphatic vessels exists. Dr. Kunze also proved that the degree of alteration in so-called "dust lungs," depends not merely on the quantity of the dust inhaled, but also on its greater or less morphological power of injuring the tissue. He concludes from his experiments that even the greatest alterations in these lungs—such as nodes, indurations, and vomicæ—are mainly produced by the inhaled dust, and that tuberculosis is only an occasional coincidence. The least serious alterations in the lungs resulted from the inhalation of lamp-black, the particles of which are very fine and little injurious; the most serious, from dust inhaled by earthenware manufacturers and stonemasons. The lungs of a locksmith showed only a moderate hyperplasia of connective tissue, the dust

consisting partly of the finest particles of iron. In a worker in oxides of iron the lungs were found full of small granules, and the morbid changes in the tissues were very considerable. The lungs of gold miners were generally indurated and atrophied; the dust in these cases is exceedingly fine. Sand produced numerous circumscribed hard nodules and thick indurations. In cloth manufacturers, the lungs, in spite of their contact with an enormous quantity of organic dust, presented but few indurations. In the lungs of two stone-masons induration and tuberculous disintegration were observed; all the other lungs were entirely free from tuberculosis of any kind, an observation which was verified by the absence of tubercle bacilli in the muco-pus in the vomicæ.
—*Lancet.*

Drainage in Ascites.

BY G. P. HACHENBERG, M.D., AUSTIN, TEXAS.

Communicated to the CINCINNATI MEDICAL NEWS.

IN the CINCINNATI MEDICAL NEWS of last January, Dr. R. J. Hicks reported a case of ascites treated successfully by drainage. I had in Rochester, N. Y., 1872, a case remarkably similar. The patient had been treated by different physicians, and after trying in vain what I considered the best means to counteract the abdominal effusion, I resorted to drainage with a silver tube. In a few days he died, not from peritonitis, but from an excessive exosomatic serous effusion, causing collapse and death as in cholera.

The patient was a merchant living in a neighboring village. I introduced the tube at his own residence, and as I had no precedence to go upon in the operation, I used all caution to prevent peritonitis.

He was charged not to leave his bed, and to keep very quiet for, at least, two weeks. Although the operation was an experiment, yet, with my views of the etiology of peritonitis, and, previous successful operations for the radical cure of hernia, I felt considerable assurance of success.

The patient had been in bed a few days. He felt so well, he got up and dressed himself, and told his wife there was no use to remain in bed any longer. And to show off his muscular agility he kicked at high marks on the walls of his chamber. This foolish exertion threw him at once into a

sudden depression, and I was telegraphed for. In this state of exhaustion the most alarming abdominal effusion took place. He was moribund when I got to his bedside.

Gleanings.

CHRYSAROBIN IN HÆMORRHOIDS.—Dr. Kossobudskii speaks of this drug in high terms, but he differs from Unna in the quantity. Dr. Kossobudskii uses a two and a half per cent. instead of a five per cent., as Unna prescribes. After washing the swelling with a two per cent. lotion of carbolic, or a one per cent. of creolin, he recommends the following ointment to be applied twice or three times a day:

R ₄ .	Chrysarobini,	. . . . .	0.8
	Iodoformi,	. . . . .	0.3
	Ext. belladonna,	. . . . .	0.6
	Vaselin,	. . . . .	15.0

M.

Or a suppository may be made with cocoa butter. If bleeding be present, tannin may be combined. Dr. Kossobudskii affirms that pain, smarting and bleeding will disappear in three or four days.—*Medical Press*.

SOME COMMENTS ON A POPULAR PILL.—A few years ago a medical writer made some comments upon the inutility, from a physiological standpoint, of belladonna in cases of constipation. In poisoning from large doses of belladonna no diarrhoea or action upon the bowels is produced, while the probabilities are that the intestinal secretions are lessened in amount. Physiological experiments as to the action of belladonna on the muscular coats of the intestines are contradictory, there being very good evidence that the drug produces actual sedation. The idea that when given to a man in ordinary medicinal doses it at all lessens the inhibitory action of the splanchnics entirely lacks confirmation.

Dr. Henry M. Fields, in a recent issue of *The Therapeutic Gazette*, criticises the composition of the much-used pill, consisting of aloin, gr. $\frac{1}{5}$, extract of belladonna, gr. $\frac{1}{8}$, and strychnine, gr. $\frac{1}{60}$. The aloin is not sufficient, he thinks; on the other hand, the belladonna is too large in amount, since if a patient has to take gr. $\frac{1}{8}$, two or three times in twelve or eighteen hours, he will be likely to get unpleasant physiological effects. The use of the alkaloid strychnia he

regards as entirely futile, since strychnia is very insoluble, water hardly affecting it in the ratio of one to five thousand. Dr. Field, therefore, would give of aloin, gr. $\frac{1}{3}$; sulphate of strychnia, gr. $\frac{1}{40}$; extract of belladonna, gr. $\frac{1}{10}$, and he adds of pulv. ipecac, gr. $\frac{1}{2}$. It would appear that in this process of emendation, the belladonna might as well be left out altogether; while we fancy that the average New York bowel would be too stormily affected by a third of a grain of aloin. The criticisms above made show at least the harm that comes from the routine prescribing of much advertised and neatly prepared pills. As a matter of fact, a grain of powdered aloes, with a little rhubarb or ipecac, will usually act quite as well as the compounds given. Dr. Field's caution as to the use of a soluble salt of strychnia, rather than the insoluble alkaloid, is one worth bearing in mind.—*Medical Record.*

CATARH SNUFFS.—For scrofulous rhinitis:

Rx	Sulphophenate of zinc,	20 centigrams.
	Salicylate of bismuth,	4 grams.
	Iodol,	3 "
	Tannate of zinc,	2 "
	Pulverized tobacco,	10 "

For chronic catarrhal rhinitis:

Rx	Pulverized alum,	2 grams.
	Borax,	2 "
	Menthol,	20 centigrams.
	Tannate of zinc,	3 grams.
	Tannate of bismuth,	3 "
	Lycopodium,	8 "

—*Journal de Med. de Paris.*—J. A. M. A.

PILOCARPINE IN LABYRINTHINE DEAFNESS.—Mr. G. P. Field, aural surgeon to St. Mary's Hospital, speaks very favorably of the use of hypodermic injections of pilocarpine in labyrinthine deafness as suggested by Politzer. One injection is given daily, the dose used being $\frac{1}{8}$ to $\frac{1}{10}$ grain; gradually increased to $\frac{1}{4}$ grain in some cases. When the middle ear is also involved, Mr. Field injects a few drops of a much weaker solution up the eustachian tube by the catheter. After injection the patient must be kept in bed or in a warm room for an hour and a half at least. When the dose is increased the patient ought to be carefully watched; weakness, excessive salivation, palpitation, throbbing, tinnitus, giddiness and impaired vision are indications for lessening the dose or suspending the treatment. If no

improvement occurs after ten days, it is useless to persevere, but where improvement is apparent the course may be prolonged to six weeks. Politzer originally recommended this treatment for recent labyrinthine disease of sudden onset, especially when supposed to be due to hereditary syphilis; but Mr. Field does not endorse this statement, and his cases show clearly that pilocarpine may be of great use in cases not coming within this category. The most convenient strength of the hypodermic solution is four per cent. The minimum dose of this is three minims.

WHEN TO OPERATE IN INTESTINAL OBSTRUCTION.—Dr. Benj. Ward Richardson recommends that in the treatment of acute intestinal obstruction mild measures (purgatives, enemata, massage, etc.), might be persevered with until the supervention of faecal vomiting, which should be taken as conclusive indication for exploring the abdominal cavity. This opinion was expressed at the Medical Society, and in the discussion, Mr. Edmund Owen pointed out that the rule would not apply to cases where the obstruction was high up, say in the jejunum, for in such cases faecal vomiting did not occur, and both he and Mr. Bryant thought that much valuable time would be lost in waiting for stercoraceous vomiting to occur.

THE CURETTE IN PUERPERAL ENDOMETRITIS.—The subject of operative interference in midwifery is one which the conscientious obstetrician approaches with caution. Cases of puerperal fever offer no exception to this rule, for they differ so in their origin of the sepsis as well as the intensity of the disease that the rash or unskillful operator is apt to do more harm than good. In the *New York Medical Journal*, February 16, 1889, Dr. Grandin treats of the use of the curette for the removal of poisonous debris from the cavity and the walls of the uterus after labor. If perfect asepsis of the parturient, her surroundings and her attendants were enforced, if sufficient patience were exercised with the physiological course of the labor, if thorough emptying of the uterus and proper contraction of that organ were secured, the occurrence of puerperal endometritis would be, if not prevented entirely, at least rendered very infrequent. His own method is as follows: when fetor of the lochia appears, he orders a thorough vaginal douche of boiled water, or of some antiseptic solution, which will cause the fetor to disappear if it is due to decomposition of matter, say a blood

clot, in the vagina. If, after a few hours the fetor reappears, he gives—with his own hands—at once an intra-uterine douche, to remove any loose debris or clots from the uterus. If the fetor reappears, in spite of this intra-uterine douche, believing that the time for active treatment has come, he determines bi-manually the position of the uterus, then places the patient in Sim's position, inserts a speculum, hooks a tenaculum into the anterior lip of the cervix to steady the uterus, inserts a dull curette, curved properly, and gently but thoroughly scrapes every portion of the endometrium. He then turns the patient on her back, inserts the uterine tube and washes out the cavity. He has in no case found it necessary to repeat the curetting. He believes that with the curette, one may not only cleanse the uterus much more quickly than by repeated douchings, but may remove poisonous matter which the douche will not remove, and at times prevent serious infection.—*Maryland Medical Journal.*

Book Notices

TEXT BOOK OF MEDICAL CHEMISTRY FOR MEDICAL AND PHARMACEUTICAL STUDENTS AND PRACTITIONERS. By Elias H. Bartley, B. S., M.D., Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children in Long Island College Hospital; Late Chief Chemist to the Department of Health, City of Brooklyn; Member of the American Chemical Society, etc. Second Edition. Revised and Enlarged. With 62 Illustrations. 12mo. Pp. 423. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price \$2.50.

There are a great many text-books on chemistry at the present time, and as not a few of them possess great merits, many would be disposed to think that there really was no "want" for any more. But the number of those who are engaged in the study of chemistry—medical students and others—is very great, and consequently there is need of a great many volumes; and, consequently, it is better that this want be met by the works of numerous authors, and not by those of only a few authors, however meritorious their works may be. There is no doubt but that competition in the preparation of text-books in the sciences is bene-

ficial. It undoubtedly stimulates investigation and study and tends to advancement.

But the work of Prof. Bartley is not entirely a new work in the scientific department to which it belongs. It has passed through a first edition, and we have now on our table a second edition. As a candidate for patronage as a text-book for students and physicians who wish to extend their knowledge of chemistry or post themselves upon the advances which have been made in the science, it has met with favor, and comes before the profession again in a second edition seeking still further endorsement.

In the second edition the work will be found to have been carefully revised—much of it having been recast, and many new articles added. The classification has been somewhat changed to accord with the *periodic law*, without entirely changing the order of the former edition. Several pages of new matter have been introduced in the Second Part. The subject of *ptomaines* has been given more prominence. The chapter on poisons has been enlarged, and a chapter on urinary tests has been added.

Part IV. is devoted exclusively to Organic Chemistry. This will be found of especial value to physicians and medical students. In this Part will be found descriptions of the different varieties of sugars, glucoses, milk, etc. Also in it will be found discussed ethers, alcohols, ptomaines or cadaveric alkaloids.

That the work will continue to meet with success there can be no doubt. It is worthy of favor, and has the merit of being an American work.

SPINAL CONCUSSION: Surgically Considered as a Cause of Spinal Injury, and Neurologically Restricted to a Certain Symptom Group, for which is Suggested the Designation Erichsen's Disease as One Form of the Traumatic Neuroses. By S. V. Clevenger, M.D., Consulting Physician Reese and Alexian Hospitals; Late Pathologist County Insane Asylum, Chicago, etc. With Thirty Wood Engravings. 8vo. Pp. 359. Cloth. Philadelphia and London: F. A. Davis. Price \$2.50.

The first chapter of the work is devoted to giving a historical account of "Spinal Concussion." In this chapter is the following statement which seems to us to contain an exaggeration: "Spinal Concussion is often the subject of

controversy in law courts, and the railways of America and Europe annually pay millions of dollars in the settlement of claims wherein this disorder is justly or unjustly alleged. Corporations are victimized by malingeringers, and individuals lose their damage suits through want of correct knowledge on the part of physicians and attorneys as to what constitutes spinal concussion."

The literature of Spinal Concussion has of late been very greatly increasing, and Dr. Clevenger has in this work arranged and reviewed all that has been done by observers since the days of Erichsen and those who preceded him.

The different and sometimes antagonistic views of many authors are fully given from the writings of Erichsen, Page, Oppenheim, Erb, Westphal, Abercrombie, Sir Astley Cooper, Boyer, Charcot, Leyden, Rigler, Spitzka, Putman, Knapp, Dana, and many other European and American students of the subject. The small, but important, work of Oppenheim, of the Berlin University, is fully translated, and constitutes a chapter of Dr. Clevenger's book, and reference is made wherever discussions occurred in American medico-legal societies. There are abundant illustrations, particularly for Electro-diagnosis, and to enable a clear comprehension of the anatomical and pathological relations.

The Chapters are: I. Historical Introduction; II. Erichsen on Spinal Concussion; III. Page on Injuries of the Spine and Spinal Cord; IV. Recent Discussions of Spinal Concussion; V. Oppenheim on Traumatic Neuroses; VI. Illustrative Cases from Original and all other Sources; VII. Traumatic Insanity; VIII. The Spinal Column; IX. Symptoms; X. Diagnosis; XI. Pathology; XII. Treatment; XIII. Medico-legal Consideration.

Other special features consist in a description of modern methods of diagnosis by Electricity, a discussion of the controversy concerning hysteria, and the author's original pathological view that the lesion is one involving the spinal sympathetic nervous system. In this latter respect entirely new ground is taken, and the diversity of opinion concerning the functional and organic nature of the disease is afforded a basis for reconciliation.

A MANUAL OF ORGANIC MATERIA MEDICA. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the Use of Students, Druggists, Pharmacists

and Physicians. By John M. Maisch, Ph. M., Phar. D., Professor of *Materia Medica* and Botany in the Philadelphia College of Pharmacy. Fourth Edition. With 259 Illustrations, 8vo, pp. 539. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$3.00.

Professor Maisch is so well known to the physicians and druggists of this country for his investigations in *materia medica*, and is held in such high repute as a teacher of pharmacy, that a work by him does not need any commendation to attract attention to its merits. The fact of his being the author is sufficient for it to secure the confidence of students and teachers as a text-book. But the work before us has reached a fourth edition, which proves that it has met with the endorsement of pharmacists and physicians.

The work embraces in its scope the drugs of animal and vegetable origin recognized by the pharmacopeias of the United States and Great Britain, supplemented by important non-officinal drugs and by others recently introduced or revived, which seemed to deserve attention.

The work is divided into four PARTS. PART I.—Animal Drugs, as animals—Spanish flies, leeches, etc.; eggs; anastomosing fibrous tissues—sponges, etc. PART II.—Cellular Vegetable Drugs, as roots; rhizomes; barks, herbs, leaves, etc. PART III.—Drugs without Cellular Structure, as extracts and inspissated juices; sugars; gums; gum resins; resins; volatile oils; fixed oils and waxes, etc.

The principal change made in this edition is the list of drugs arranged according to origin, in which Bentham and Hooker's *Genera Plantatum* has been followed. The arrangement, according to this authority, seemed to be particularly appropriate at the present time, in view of the approaching revision of the United States Pharmacopeia.

DISEASES OF WOMEN AND ABDOMINAL SURGERY. By Lawson Tait, F. R. C. S., Edin. and Eng., LL.D., M. D., (Honoris Causa) of the University of New York, Union University of Albany, and the College of Physicians and Surgeons of St. Louis; Professor of Gynecology in Queen's College, Birmingham; Surgeon to the Birmingham and Midland Hospital for Women; Honorary Fellow (Late President) British Gynecological

Society, etc. Vol. I. 8vo. Pp. 547. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price \$3.00.

The following paragraph we quote from the preface of the work, which probably may seem to belong more appropriately to the editorial pages:

"During the period of these ten years gynecology and abdominal surgery have made marvelous advances. The old-fashioned mechanical school—the teaching of the speculum, the sound, the caustic stick, and the pessary—has been practically killed, and an advanced eclecticism now prevails. This has largely grown out of the wonderful revelations obtained by the experiences of operative surgery. In 1877 Spencer Wells left ovariotomy where it had been for half a century before him, with a mortality of one in four. Now it has a death rate of a little more than three in a hundred, and this fact alone has given an impetus to and a facility for the alleviation of suffering in other directions, of the value of which the most enthusiastic estimates that have yet appeared probably fall quite short."

The author states that he professes to deal in this work with "Diseases of Women and Abdominal Surgery," a title which records the historical fact that the evolution of abdominal surgery has proceeded entirely from the necessities of the special diseases of women, and their combination is now so complete that it is unlikely they will ever be again separated. The day has gone by, he asserts, when the treatment of pelvic and abdominal diseases, so prevalent amongst women and relatively so rare amongst men, was regarded as a mere appendix to the work of the accoucheur.

The esteem in which Prof. Tait is held as a distinguished and able gynecologist is so great that a work by him needs no commendation to give assurance of its value to the profession. His great experience and success in the treatment of diseases of females and abdominal operations in pelvic affections has made him so well known that any work by him would be greatly sought after by medical men.

The work upon our table has just been issued, and is a treatise upon the diseases, medical and surgical, of all the pelvic organs of the female. The first organ to which attention is given is the mons veneris, then follows consideration of the vulva and its parts, as the labia majora, clitoris, etc.; vagina, urethra and bladder; uterus, os, cervix, fundus;

broad ligaments and mesentery; fallopian tubes; ovaries; pelvic bones; liver and gall bladder; kidneys, spleen and pancreas; colon, rectum, cæcum and small intestines; breast.

The work contains a number of very beautiful plates, and some sixty-two illustrations.

Every physician should have the work in his library, for it will be constantly quoted by eminent writers. The high standing of Prof. Tait as a gynecologist makes him an authority.

THE YEAR-BOOK OF TREATMENT FOR 1890. A Critical Review for Practitioners of Medicine and Surgery. Contributors: J. Mitchell Bruce, M.D.; Malcolm Morris, F. R. C. S., Ed.; Alfred Cooper, F. R. C. S.; Edmund Owen, F. R. C. S.; Sir Dyce Duckworth, M.D.; Sidney Phillips, M.D.; Geo. P. Field, M. R. C. S.; Henry Power, M. B., F. R. C. S.; James Frederick Goodhart, M.D.; Chas. Henry Ralfe, M.D.; W. J. Walsham, F. R. C. S.; and ten other gentlemen. 12mo. Pp. 324. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price \$1.25.

The volume of this work for 1890 is fully abreast in value of the volumes of previous years. In fact, it is really wonderful the amount of valuable matter that is contained in a work so small. In the less than four hundred pages of the book, there seems to be contained the cream of all the medical journals of the world published during the year 1889. There will be found noted every discovery made during the year in every department of medicine—in the practice of medicine, in surgery, in obstetrics, in *materia medica* and *therapeutics*, etc. The twenty-one editors or contributors have each had charge of some department, and it has been his business to note whatever of practical value appeared in medical literature during the year 1889, in that department. For instance, Dr. J. Mitchell Bruce collated all the facts in regard to diseases of the heart and circulation; Dr. C. H. Ralfe sought out the facts in regard to diseases of the kidney, diabetes, etc.

The medical literature of all countries has been placed under contribution, as we have intimated. Each department of practice has been fully and concisely treated, and care has been taken to include such recent pathological and clinical work as bears directly upon Treatment.

OPHTHALMOLOGY AND OPHTHALMOSCOPY. For Practitioners and Students of Medicine. By Dr. Hermann Schmidt-Rimpler, Professor of Ophthalmology and Director of the Ophthalmological Clinic in Marburg. Translated from the Third German Revised Edition. Edited by D. B. St. John Roosa, M.D., LL.D., Professor of the Diseases of the Eye and Ear in the New York Post-Graduate Medical School; Surgeon to the Manhattan Eye and Ear Hospital. 183 Woodcuts and Three Colored Plates; 8vo, pp. 571. Cloth. New York: Wm. Wood & Co.

This work is by a distinguished German ophthalmologist. The publishers employed a German scholar to translate it; and as he was paid for his work, consequently his name does not appear. The translation is edited by Dr. St. John Roosa, of New York, who has made but very few additions to it.

The work, says the author, principally subserves didactic purposes, and is intended to present modern ophthalmology in a form which will facilitate its reception. This requires, above all, a distinct separation—which should also be apparent externally—of the different divisions and subdivisions, and a gradually advancing presentation of the subject, that assumes as little as possible.

The author has given a more detailed description than usually appears in works of other writers, to ophthalmoscopy and everything belonging to this category. On the other hand, the operations have only been described in their salient features. What has been gained in this way, has been used to advantage in discussing other subjects.

Dr. St. John Roosa thus speaks of the work: “The work is a clearly written, comprehensive and scientific treatise, that can not fail to secure the confidence of the profession in the English-speaking countries, as it has that of the Germans.”

MONTHLY NURSING. By A. Worcester, A.M., M.D., Fellow of the Massachusetts Medical Society; Physician to the Waltham Hospital. Second Edition, 12mo, pp. 250. Cloth. New York: D. Appleton & Co. Price, \$1.25.

Nursing, says the author, is a new profession, and marks a glorious advance in civilization. Like the profession it

supplements, it naturally divides into specialties, chief among which will always be that of monthly nursing.

As the title indicates, the work is devoted to lying-in nursing. Heretofore the duties of the position have usually been performed by ignorant women, who, instead of being aids to physicians, have been great annoyances. Their officiousness has always been in proportion to their ignorance; and "eternal vigilance" on the part of the physician, with reference to their interference with his orders, has been the price of a safe termination of a parturition. How often has the physician been annoyed—angered—by finding his prescriptions set aside by the ignorant nurse, and her own substituted.

In Chapter VI., the author states that, "in child-bed, according to a fair showing, five in a thousand—one out of two hundred cases—die. This fatality is shown to be more than half due to the accidents of child-birth; and it is of course partly due to the liability to disease and death which follows us all alike from beginning to end. Lying-in women, besides, as the same statistics show, have a decidedly increased liability to fatal disease during their confinement and after their safe deliverance, which accounts for at least thirty per cent. of the fatality above-mentioned. This liability to fatal disease by no manner of means expresses the critical condition of a woman during confinement. There is far greater danger of her never fully recovering her previous health."

It is the aim of the little work on our table, not to make midwives of monthly nurses, but to set forth such principles pertaining to obstetrics as will make them efficient helps to physicians while in attendance upon labors and after parturition has taken place, and useful to their patients during the whole lying-in period. The chapters have grown out of a series of lectures given to the nurses at the Boston Lying-in Hospital during the author's term of service there as house physician in 1883, and it is now published under the stimulus he finds in teaching the nurses of Waltham (Mass.) Training School.

Physicians should recommend the work for attentive study to those engaged in nursing. It will be to their advantage to do so, besides benefiting their patients. The work, however, contains much that even physicians will find of value to themselves.

THE PHYSICIAN'S LEISURE LIBRARY. A Treatise on Fractures. By Prof. Armand Després, Surgeon of Charity Hospital; Member of the Society of Surgery; of the Anatomical Society, etc. Translated by E. P. Hurd, M.D., Member of the Massachusetts Medical Society, etc. 12mo, pp. 112. Paper. Detroit: George S. Davis. Price, 25 cents.

This little volume is taken from the third edition of the *Chirurgie Journalière* of Prof. Armand Després. It was not designed to be a complete treatise on Fractures, but to embody the author's ripe experience in the treatment of the more common fractures, and to be a guide to the ordinary practitioner. Professor Després does not give many methods—he presents only those which have given him the best results.

MONOGRAPHS. I. CHRONIC NASAL CATARRH. Three Clinical Lectures. By G. M. Lefferts, A.M., M.D. II. OTITIS MEDIA PURULENTA. By Dudley S. Reynolds, M.D. III. ATROPHIC NASAL CATARRH. By Carl Seiler, M.D. IV. SUMMER DIARRHOEA IN CHILDREN. By I. N. Love, M.D. V. THE TREATMENT OF WHOOPING COUGH. By John M. Keating, M.D. VI. REMINISCENCES IN THE HISTORY OF DIPHTHERIA. By Bedford Brown, M.D. VII. THE TREATMENT OF PYOGENIC MEMBRANES—POST-RECTAL ABSCESS. By W. W. Dawson, M.D.

Besides the clinical lectures, the titles of which we have given above, *Monographs* contains some four or five others, which we have omitted, in consequence of not wishing to occupy so much space. One is a lecture on antiseptic surgery by a homeopathic physician. Probably the authors of these lectures, whose titles we have stated, would have felt more flattered by having them bound in the little volume, if the contributors had been limited to regular physicians.

But what is *Monographs*? It is a small volume composed of clinical lectures, of about 150 pages, published by a St. Louis house that manufacturest he well-known proprietary medicine known as Listerine—the Lambert Pharmacal Company. The lectures were published originally in different medical journals. The names of the authors of the lectures is evidence that they are interesting and meritorious, and, of course, make the volume a valuable addition to the libraries of those to whom it is presented.

Editorial.

TENTH INTERNATIONAL MEDICAL CONGRESS.—The Congress will be opened in Berlin on Monday, Aug. 4th, 1890, and will be closed on Saturday, August 9. It will consist of legally qualified medical men who have inscribed themselves as Members, and have paid for their Card of Membership. Other men of science who interest themselves in the work of the Congress may be admitted as Extraordinary Members. Those who take part in the Congress will pay a subscription of twenty marks (one pound stg. or five dollars) on being enrolled as members. For this sum they will receive a copy of the Transactions as soon as they appear. Gentlemen may, however, be enrolled as members by sending the amount of the subscription to the Treasurer, Dr. M. Bartels, Berlin SW., Leipziger-strasse 75, with their name, professional status and residence appended, and enclose a visiting card.

FOLLOWING a suggestion recently made by Dr. C. Seiler in the *Medical Record*, Messrs. William R. Warner & Co., the well-known pill and compressed pastille manufacturers, of Philadelphia, are now placing on the market ANTISEPTIC PASTILLES for the treatment of certain nasal affections. These pastilles are not only powerfully antiseptic and comparatively innocuous, but also distinctly deodorant, as sodium bicarbonate, sodium borate, sodium benzoate, sodium salicylate, menthol, and oil of wintergreen enter into their composition. One of the pastilles makes two oz. of a lotion or spray for the nostrils, and it is, according to Dr. Seiler, "sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucous membrane, and as it is of proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. As an antiseptic and deodorizer it is also far superior to Dobell's solution or any other non-irritating deodorizer and antiseptic."

CINCINNATI SANITARIUM.—We are in receipt of the Sixteenth Annual Report of this institution ending November 30, 1889.

The Cincinnati Sanitarium is located on the suburban height north of Cincinnati known as College Hill. It consists of one large three story and basement brick building,

four detached cottages, and a capacious amusement hall, billiard-room, and conservatory. The buildings are surrounded by improved grounds, containing elegant and shaded walks, fruit and ornamental trees.

"At the beginning of the year," Dr. Orpheus Everts, the Superintendent, says in his Report, "there were 70 patients in the Sanitarium—35 men and 35 women. Since that date, up to the present time, November 30, 1889, there have been 120 men, and 56 women, admitted: making an aggregate of 246 patients treated within the year. Of the persons treated, 79 were discharged as having 'recovered,' 61 as 'improved,' 34 as 'unimproved,' and 9 as 'died'; leaving in hospital at the end of the year, 63 patients—31 men and 32 women."

Dr. Everts draws attention to the fact that the patronage of the Sanitarium has steadily increased from year to year, "without resort to other than professional methods." This of itself, he thinks, should be recognized as a sufficient testimonial of the usefulness and reputation of the Sanitarium, upon which alone its success must depend—a respect in which private hospitals differ so widely from public institutions of the kind.

Notwithstanding the many believers in "Christian Science" that are to be found at the present time, yet Dr. Everts does not seem to have lost faith in the progress of the race. He still believes in the advancement of intelligence. We quote as follows: "Natural phenomena no longer require the assumed existence of supernatural intelligence or force to account for their manifestations. The more intelligent and learned, for example, no longer believe in witchcraft, nor ascribe insanity to the possession of the insane person by the devil or other evil spirits. Men do not sow, nor reap, nor breed stock 'in the moon,' as they once did. Many persons do not fear to start on a journey, or undertake new enterprises, on Friday. The world is no longer thought of as an extended plane, flat and square, with a lake of fire and brimstone underneath, and an abode of supernatural happy beings above the solid firmament that canopies it; nor as a fixture, around which, for its exclusive benefit, the sun, moon, and stars move—a thing created but yesterday, and liable to be destroyed to-morrow. Yet, as whatever is, is but a continuation of what was, however modified by growth, it is not to be wondered at by the more intelligent that so many of the beliefs or

notions of the present day, when analyzed, are found to consist for the most part of the same old errors of ignorance and incapacity that characterized the people of past centuries."

Dr. Everts must hold the opinion that the *mind* is a *force*, evolved in consequence of certain physical conditions existing; for, in one of the paragraphs of his remarks, in discussing Christian Science, he says, "The notion of 'Christian Science' that physical conditions are amenable to spiritual influences, and that diseases can be cured by the exercise of mental force, is not far removed from the general belief that mind is a manifestation of spiritual entities made up of certain 'faculties' capable of independent action, such as 'imagination,' 'will,' 'judgment,' etc., occupying living bodies temporarily, and not only controlling but instigating human conduct.

But Dr. Everts' report is not limited to giving details of his institution and to discussions of mental phenomena, but there is found in it some very practical information in regard to the actions of a number of new remedies. He states that further use of sulphonal justifies a higher estimate of its merits as a hypnotic than he had previously held. He considers that its insolubility is objectionable, rendering its operation slow and somewhat uncertain; whilst its tastelessness is a virtue that is sometimes highly appreciated. Phenacetine, he says, has given satisfaction in neuroses attended by fugitive and annoying pains of less severity than the pains of neuralgia or rheumatism, but is not equal to the emergency in cases of severe headache or the pains of acute inflammatory diseases.

Nine deaths occurred in the institution during the year; five from paresis, two from heart affection, and one from epilepsy.

THE NEED OF STATE BOARDS OF MEDICAL EXAMINERS.—A number of States have boards of medical examiners to examine persons who propose to practice medicine within their limits. Among the number is Minnesota. There is no reason to believe, so far as we know, but that those who apply to the State Board of Minnesota for examination, in order to obtain a license to practice medicine in that State, are of as high a grade in education, intelligence, medical acquirements, etc., as those who apply to the boards of examiners of other states. But that our readers may know

the *grade* of some of the gentlemen who proposed "to hang out their shingles as doctors" in the State of Minnesota, if they had not been stopped by its Board of Medical Examiners, we print some of the answers handed in at recent examinations to the questions put to applicants for license. We copy from the *Northwestern Lancet*, which asserts that they have been copied by it *literatim et verbatim* from the written answers of the candidates:

"Symptoms of Oedema of the glottis are that the patient feels husky and has sore throat. I would amputate it if necessary. I would do the operation within three or four months if it was a bad case."

"The dose of morphia sulph. for a child of five years, hypodermically, would be $\frac{1}{4}$ grain, and if that doesn't give relief I would give $\frac{1}{2}$ grain."

"The dose of Antipyrine for a child five years old is fifteen grains every three hours."

Q. "What is an element?" A. "Earth, water, wind, fire."

Q. "Definition of Inorganic Chemistry?" A. "Chemically examining of mettals or in geoligy for lime phosphates or any minerals."

Q. "Definition of Organic Chemistry?" A. "of flesh stomach bowells liver or kidney or any other organic matter."

"The Sterno-Cleido-Mastoid muscle takes its origin from the mastoid portion of the temporal bone, runs down the neck and is inserted into the upper and back portion of the scapula."

"The coverings of the femoral artery is the same as of an hernia, it lies between the femoral vein and sciatic nerve."

"The pulmonary artery is a branch from the great arto fully supplying the lungs with arterial blood."

"The coverings of the femoral artery are three in number and in Scarpa's triangle include the vein and nerve."

"The kidney is a muscular formation, in shape oblong, color quite dark, weight about one pound to one and a half, but may vary considerable."

"Parts severed in amputation at upper third of thigh—just avoiding the insertion of the glutei musels, passing through the Taylor's musel, periostum and femer."

"Coverings of oblique inguinal hernia—skin superficial facia, transversalis mussle peritoneum and omentum."

"The sympathetic system is composed of all the filament

of nerves that start from the spinal cord and are distributed to all parts of the system, especially the brain. The cervical portion ramifies the encephalon in general. The dorsal portion ramifies the arms."

"Extra Uterine pregnancy may be a fungoid growth or tumor fibroid in its character or any extra growth in the uterous would be called extra uterine pregnancy."

"A breech presentation may be known by the sense of touch, the buttox being different in formation from the cranium. The anus is different from the mouth, absence of tongue and nose. get your finger in the inguinal region soon as possible and assist your patient by firm but gentle traction."

We regret very much that the *Northwestern* does not state whether any of the candidates who handed in such answers as above to the written queries put to them, held diplomas from medical colleges. If they did, and it was ascertained that the diplomas had not been forged, the names of the institutions conferring them should be published to the world, so that their diplomas in the future should not be recognized—their graduates not be received into medical societies.

The *Northwestern* very correctly speaks of the Minnesota State Board as a *bulwark* against the admission of grossly incompetent practitioners of medicine into that State. No one, we think, should be skeptical as to the need for, and value of, a State Board of Medical Examiners to a State. Ohio has as yet none, but we hope it will not be long until it does. It is rapidly becoming filled with the quacks which have failed to obtain footing in those States that have Medical Boards.

DRAINAGE IN ASCITES.—A short communication on this subject, from Dr. Hachenberg, of Austin, Texas, was received too late to be placed in its proper position.

ANTIPYRINE IN WHOOPING COUGH.—Dr. I. B. Twitzky, who has witnessed four epidemics of whooping cough in the city of Kieff (in 1880, 1881, 1887 and 1888), has used antipyrine in the last two epidemics with great success, and claims for it the term "almost a specific," which confirms the experiments of Sonnenberg, Griffith, Dubousquet-Laborderie and others. It is to be used only in the spasmodic stage.

AN organization, called "The Medical Defense Union," has been formed in London, which, upon the annual payment of ten shillings by a doctor, guarantees to defend him against any charge made with blackmailing or other improper purpose during the year. Branches of the organization are to be established throughout Great Britain.—*New York Sun.*

CARLISLE ON DOCTORS.—We recently saw it stated in an exchange that Carlisle tells in his reminiscences how he once rode sixty miles to Edinburgh "to consult a doctor, having at last reduced his complexities to a single question: Is this disease curable by medicine, or is it chronic, incurable except by regimen? This question I earnestly put, and got response: 'It is all tobacco, sir, give up tobacco.' I gave it instantly and strictly up. Found after long months that I might as well have ridden sixty miles in the opposite direction and poured my sorrows into the long, hairy ear of the first jackass I came upon, as into this medical man's, whose name I will not mention."

CURTAILMENT OF THE SCROTUM FOR SEXUAL DISORDERS.—Dr. G. Wiley Broome recently read a paper before the St. Louis Medical Society (*Weekly Medical Review*) in which he says he has been led to believe that many of the forms of impotence, including spermatorrhea, if not induced solely by a long and flaccid scrotum, are largely responsible for the presence of these deplorable infirmities. His general proposition is, therefore, that no form of atonic impotence can be completely restored in cases with redundant scrotum, without first curtailing the same.

Recently, he says, a case came under his treatment, who had been reduced to a complete state of sexual hypochondriasis by this condition. His scrotum was long, flabby and thin. He was aged 28 years, and had masturbated most of his life. All his attempts to copulate were failures; neither was he able, at the opportune moment, to maintain an erection or effect intromission, yet there was a constant ejaculation of semen. He stated that for several years he suffered from almost intolerable dragging weight in his testicles and along the cord, and a constant pain in his back. There was varicocele on the left side. He was sent to the Protestant Hospital, where about three inches of his scrotum was removed. Soon after the operation he began to

improve. The dragging weight was scarcely felt after he got up, and the mental hypochondriasis was no longer a burden to him.

In another paragraph, Dr. Broome says: "While it has not been demonstrated to my entire satisfaction, yet it is believed that azoo-spermism, or infertile semen, may follow a chronic condition of relaxed and elongated scrotum, and partial atrophy of the testicle is no doubt in many cases induced by the same cause. The constant dragging weight effected by the unsupported testicle through the spermatic cord is sufficient to produce these changes, including many others of the morbid phenomena peculiar to sexual debility. The remedy for this evil lies in the operation proposed, which is nature's remedy. The shortening of the scrotum and the establishment of nature's method of mechanical and physiological rest of the testicle, is the end accomplished. Patients frequently consult us for what they describe as a loss of sexual vigor. They bewail the condition that enables them to copulate successfully once in a great while only, and then the too frequent result of the consultation is unavailing to them. Perhaps without a thorough investigation into the actual causes of their trouble, or even an inspection of the genital organs, the usual prescription is given for the ordinary aphrodisiacs and the patient continues on in what he considers a woeful state, and if he be a young man in contemplation of matrimony, the mental anxiety borders on desperation. He finds no relief from the medicines prescribed for him; indeed, he is growing worse, and may be turns his back against our profession."

COMMENCEMENT EXERCISES OF THE CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—Just as we were closing the present issue of the MEDICAL NEWS, the Cincinnati College of Medicine and Surgery held its fifty-fifth Commencement at the Scottish Rite Cathedral on Broadway between Fourth and Fifth Streets.

The pretty stage, with the Faculty, graduating class and floral gifts, made a picture that will long live in the memories of the friends of the graduates who filled the Cathedral to witness and enjoy the commencement.

The following very interesting programme was rendered: Invocation, Rev. John J. Francis, D.D. Music—March, "Volunteer" (Metra). Report and remarks by the Dean

Professor, R. C. S. Reed, A.M., M.D. Music—Selections, "Clover" (Suppe). Conferring of Degrees by the President of the Board of Trustees, Professor George W. Harper, A.M. Music—Waltz, "Santiago" (Carbin). Faculty Address by Professor W. E. Lewis, M.D. Music—Gavotte "Il 'pense" (Eilenberg). Class oration by J. F. Loomis, M.D. Music—Polka, "Said Pasha" (Stahl). Distribution of prizes. Music—Finale, "C. C." (Strauss). Music by Adam Weber's orchestra.

The most interesting event of the evening was the award of the general prizes, as up to the time that the names of the successful ones were read off only the Faculty knew who the winners were. The award was as follows: First prize, gold medal—W. H. Shank, Ohio. Second prize, gold medal—M. T. Chadman, Pennsylvania. Third prize—J. Ingram Bonar, Kentucky. Honorable mention was made of A. F. Juettner, A. E. Kipp, E. B. Earhart, J. W. Davis, J. W. Kautz, J. F. Loomis, C. O. Ralston, G. I. Cullen and Geo. H. Astler. The highest general average was 94.4, made by A. F. Juettner. The floral gifts were many and some very beautiful.

The following is a list of the graduates:

Geo. H. Astler, Ohio; J. Ingram Bonar, Kentucky; M. H. Campbell, Ohio; M. L. Chadman, Pennsylvania; G. P. Cullen, Ohio; W. J. Davis, Indiana; A. F. Durst, Kentucky; E. B. Earhart, Ohio; J. W. Estes, Kentucky; S. B. Grimes, Ohio; Charles L. Gritman, Washington; E. G. Hersh, Ohio; Joseph E. Peter, Indiana; A. F. Juettner, James W. Kautz, A. E. Kipp, Ohio; J. F. Loomis, Kentucky; Chas. McGill, West Virginia; H. D. Meek, Kentucky; A. J. Morgan, Tennessee; C. O. Ralston, John B. Scott, W. H. Shank, Ohio; J. C. Strong, Illinois; H. A. Williams, Kentucky; Chas. T. C. Wilson, Illinois; J. B. Wilson, Ohio.

RECENTATIONS OF GYNECOLOGISTS.—Last summer a lady came from Texas to Cincinnati to obtain relief on account of neurological difficulties of the ovaries. She had suffered with pains until life had become miserable to her. A distinguished gynecologist of Cincinnati removed both ovaries at a single operation. She rapidly recovered from the operation and returned home cured of her neuralgic sufferings. We read a letter from her several months after her return to her family, full of grateful expressions for her relief, and

expressing herself as feeling as if she had entered upon a new life.

We felt considerable surprise, therefore, to read in the remarks of Dr. Hughes, of St. Louis, in a medical discussion, the statement that gynecologists have just now begun to recant the errors of the last twenty or thirty years. Fortunately for women, he says, the recantations of the gynecologists have come timely to the rescue. "Emmett tells us in a very satisfactory and conclusive communication in the *N. Y. Med. Rec.* of last week, that this procedure of extirpating the ovaries of women for neurological difficulties has been a mistake, and Mr. Goodell also comes with another timely recantation, telling us of neural diseases that are counterfeits of gynecological disease. Gentlemen, they never were counterfeits of gynecological disease. The gynecologists were mistaken in their diagnosis, classing as gynecological diseases affections which had no right to be so categorized. It is never too late to mend, and better late than never. This recantation of the errors of the past on the part of gynecologists is a matter of congratulation. Since Recamier invented the speculum—a really good instrument, which made of gynecology a science—and brought it into use, what rivers of blood have flown, what useless, needless and mistaken sacrifices have been made in the genito-urinary apparatus of women, based upon specular examination. How long has it been since the craze of Baker Brown subsided? Now no one thinks of unsexing a woman by extirpating her clitoris for the simplest and smallest neurological affection. Passing from that, they went to the ovaries and extirpated them, proposing to depopulate the asylums of the country by oophorectomy. They promised that insanity and epilepsy should not return, and you know that in this hall an operation was proposed for the removal of a congested ovary for hystero-epilepsy, so-called, which was not hystero-epilepsy at all, and which did not have its origin in the congested ovary if it had been a hystero-epilepsy."

We have no doubt but that gynecologists have been guilty at times of great mistakes, and have not hesitated to say so in the News, but when we see the life of a woman made miserable from what seems to be a neurological affection of the ovaries, and prompt and permanent relief follow upon the removal of the ovaries, we must recognize the fact.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 267. } MARCH, 1890. { VOL. XIX. No. 3.
Old Series. New Series.

Original Contributions.

Germs.

BY A. ARNOLD CLARK, LANSING, MICH.

Read before the Sanitary Convention held at Vicksburg, Mich.,
December 5 and 6, 1889.

EVERY day in the week and every hour in the day we greet some friend upon the street with, "How do you do?" or in some other way inquire concerning his health, because we know that to be healthy is to be happy, and when our friend tells us that he is well he does not need to add that he is hearty, that he is comfortable, that he is buoyant, that he is filled with happy, hopeful dreams.

Yet how few of us ever stop to inquire just how do we really get sick, and just what is disease? We know, in a general way, that if we escape those diseases which are usually called epidemic, we will live on and on until this

HUMAN CLOCK-WORK RUNS DOWN,

and we will die of old age.

But this seldom occurs. Over one-fourth of all who are born into this world die before they are five years of age, from those diseases incident to childhood. Escaping these, there is still danger of dying until ten years of age from diphtheria and scarlet fever. Escaping these, life is a continual battle with typhoid fever until thirty years of age. Escaping typhoid fever, the human race still continues to die from this great "white plague"—consumption. If this audience is an average Michigan audience, one person in every eight here to-night will die from this disease, and this is true, with slight variation, over the civilized world.

What are these diseases which bring early mourning to so many homes, and how may they be prevented? If all

which a man has he will give for his life, this is the most important question ever asked of any civilized audience in any civilized age.

It was formerly thought that these great plagues were a visitation of Providence, and people bowed the head meekly to what they thought was a divine punishment for sin. But we now know that disease is due, not to the providence of God, but to the improvidence of man; and this great change in public thought has come about through the discovery of the germ.

WHAT IS A GERM?

It is a matter of common experience to wake up some fine spring morning and find your lot full of thistles, growing where none grew before. Why? Because the seeds of thistles have been carried in the air from your neighbor's thistles and found a favorable soil in your front lot. It is a matter of common observation that grape juice left to itself will turn to wine. Why? Because the seeds of fermentation—infinitely smaller than the seeds of thistles—have found their way into this grape juice, and grown a crop of fermentation. It is also a matter of common observation that wine left to itself will turn to vinegar. Why? Because another seed or germ, whose business it is to make vinegar, has fallen on this favorable soil, and grown a crop of vinegar. When you can your fruit you boil it. Why? To kill the germs of fermentation in the can. And then you shut it up tight. Why? To keep out the germs of fermentation floating in the air. It is also a matter of common observation that meat left to itself will decay. Why? Because the germs of putrefaction in the air have found in this meat a favorable soil for growing decay.

It is also a matter of common observation that a boy perfectly well yesterday will wake up this morning sick with scarlet fever. Why? Because, just as there is one seed or germ which will turn grape juice into wine, and another kind which will make vinegar, and another kind which will turn sweet meat into carrion, there is another germ whose sole business on earth is to make well people sick with scarlet fever.

You thus see that there are

A GREAT MANY KINDS OF GERMS,

Some of which are harmless to man and some of which are

poisonous. There are constantly on the teeth about eighteen different kinds of germs. Man's mouth is a regular botanical garden. And yet we do not die, because these germs are not poisonous to man. These harmless germs abound on the money we use, the pages of the books which we read; they swim in the water we drink, and swarm in the air we breathe. It is a germ which turns our milk sour, it is a germ which turns milk blue, and another which turns it red. The beautiful light seen at night from certain kinds of wood is caused by germs. But among all these there is a large family of germs whose sole business is to produce disease.

You notice that I use the term germ or seed, because, though these germs sometimes behave more like animals, they really are minute vegetable cells.

Before we can have any of these phenomena two factors are necessary:

THIS SEED AND A SUITABLE SOIL.

The germ of fermentation finds this favorable soil in grape juice, the germ of scarlet fever finds the soil in the human body. And we may go to the Laboratory of Hygiene at our State University, and we will find a long row of test tubes or bottles containing cultures of germs, some of them harmless to man, but among the labels on the bottles we will read: typhoid fever, cholera, consumption; and you may arrange a half dozen different animals in a row and inoculate each from a different bottle and you may produce a half dozen different diseases in those animals, just as surely as a farmer may sow his farm with a dozen different kinds of seed, and produce a dozen different crops. And as the seeds of thistles always produce thistles and not corn, so the seeds of scarlet fever always produce scarlet fever and nothing else, and you can't get scarlet fever unless you have the germ, and you can't get the germ except from a previous case of scarlet fever. When you ladies can fruit, if you keep the germs out,

THEY DO NOT DEVELOP SPONTANEOUSLY IN THE CAN.

So the germs of scarlet fever no more arise in the air out of nothing than birds do.

It was formerly thought that animals developed spontaneously. Von Helmont gave a formula for the spontaneous production of mice: "Take a dirty shirt, put into it some

grains of wheat, subject the whole to heat, and at the end of a certain time there will be a transmutation of the wheat into mice." People used to think the ooze of the Nile turned into eels. So when contagious diseases were first studied it was claimed that they developed *de novo*. Scarlet fever and diphtheria were attributed to dirty surroundings. But there was no scarlet fever in this country until the germs of scarlet fever were brought to this country one hundred and fifty years ago from a previous case, and if the germs of scarlet fever were all destroyed to-night, scarlet fever would be again a disease unknown. Diphtheria no more arises from the smell of decaying vegetables than bees are generated by the smell of decaying meat, as Virgil believed. Bad smelling marshes no more give birth to typhoid fever than to snakes and frogs, as the ancients thought. You can no more spontaneously generate a case of glanders than you can the horse that has it.

This is not intended as sanitary license to any man to have unsanitary surroundings. To be sure, a man may live in dirty surroundings, and yet never die of a communicable disease unless he gets the germ, but these filthy surroundings simply harrow the soil for the better growth and multiplication of these germs when they come. For example, a man may breathe the germs of consumption into his lungs and not get consumption, because his lungs are so healthy and vigorous and he is so strong that the germs are thrown off—they do not find a congenial soil.

All of these old questions of sanitary science, ventilation, sewerage and water-supply, have a new meaning when studied in the light of the germs. You often hear a man say that he has drank bad water all his life, and that he is not dead yet, much as a man might refuse to get his life insured because he always has lived. But he may be telling the truth. You may drink water from a well located only a few feet or rods from a neighbor's vault, and your well water may come from the vault, and you may drink this filthy water a lifetime if you enjoy that sort of thing and never get sick, but suddenly there is a case of typhoid fever in that neighbor's house, the germs of typhoid fever find their way to that vault and to your well, and then you are drinking not only the filthy water but typhoid fever as well.

Perhaps you would like to know

HOW THESE GERMS LOOK AND ACT.

Under a high magnifying power some of them look like a dot. These are called micrococci, others are rod-shaped and called bacilli, others are shaped like a cork-screw and are called spirilla.

The largest of these germs is the *spirillum volutans*, which is one three-hundredths of an inch long—a perfect giant. There are germs so small that twenty-five thousand placed end to end would only cover an inch.

Cohn, describing movable bacteria, said that, swarming in a drop of water they looked like an ant hill. They sometimes go in pairs, then form themselves into beautiful chains. Swimming forward, they stop and without turning around, dart suddenly backward, thus forward and back as if executing the movements of a quadrille. Remaining motionless a long time, they dart suddenly forward "like an arrow," "spin around like a top," and swim like a fish. It is almost impossible not to think of them as possessed of consciousness and having a good time. Dr. Kedzie, describing a drop of water full of bacteria, said it looked like an "animated skating rink."

These germs multiply and reproduce very rapidly. Though no larger than the point of a pin, they actually lay eggs, or more accurately speaking (for they are vegetable) they form seeds or spores. They also multiply by division—one germ separating into two. Though they are so small that we can not see them, it is estimated that in a few days the descendants of one germ would fill all the oceans of the earth, and though they are so light that Tyndall saw them dancing in the sunbeam of a darkened room, yet in a few days, it is said, the descendants of one germ would weigh many thousand pounds. They do not, as a matter of fact, multiply so rapidly, because in their growth they produce a poison in which they can not live, but this poison which destroys them also destroys us. And just as the germs of fermentation break up the sugar of the grape juice into alcohol and carbonic acid gas, so the germs of scarlet fever, entering the body, break up the body compounds into poisons which ultimately destroy us—each germ producing its own peculiar poison, its own peculiar symptoms.

So each germ has its own

FAVORITE SOIL IN THE BODY.

The germs of cholera and typhoid fever enter the body

through the water we drink and seek the intestinal tract. It is probable that typhoid fever can not be communicated through the air which we breathe unless the germs in some way find their way into the stomach.

Typhoid fever is not always spread by the drinking water. There was a severe outbreak of the disease at the State Prison in 1888. The State Board of Health went to investigate. A bottle was exposed over the entrance to the sewer, and Dr. Vaughan afterward found the germs of typhoid fever in the sewer air collected in this bottle. Dr. Baker also carried away some germs, but his were collected in his mouth, and as a result he had typhoid fever, though he did not eat or drink at the prison. It is probable, however, that the germs in some way found their way into his stomach. The germs of diphtheria, scarlet fever and consumption, on the other hand, enter the body through the air which we breathe, the germs of diphtheria finding a favorite soil in the membrane of the throat, the germs of consumption in the lungs.

These little rod-shaped germs which cause typhoid fever have been found in the water drank by typhoid patients. These germs have been made to grow in beef broth, and, inoculated in dogs, a regular run of typhoid fever has been produced the same as in man. The other little rod-shaped germs which cause consumption have been found in the sputa from consumptive patients—yes, on the walls of rooms inhabited by consumptive patients; these germs have been sprayed into the air, dogs have been placed in the inhaling room and compelled to breathe these germs, and they afterward died of consumption.

In other diseases animals have not been inoculated with the germ, indeed the germ has not been isolated with certainty, and yet we know that these diseases are caused by a living germ which multiplies and reproduces after its own kind.

Two or three years ago a Pullman car conductor came in contact with the germs of smallpox in his car near Chicago—passed through your village on the Grand Trunk to Montreal, and was taken sick with the disease. No pains were taken to kill the germs, the ignorant inhabitants refused to vaccinate, declaring it a “wicked attempt to thwart the will of the Almighty,” and in a few months over three thousand people in Montreal died of smallpox as a result of the one case.

It was carried to different parts of the United States ; Michigan, the most exposed of any State, escaped, because Michigan had at her great ports inspectors of travel who vaccinated all who came through, and disinfected all clothing, thus killing the germs.

Every day in the week there are cases of diphtheria and scarlet fever in this State where the germs have been carried in the hair and clothing, where they have been carried long distances by letter, where they have lingered in the bedding or carpet, or have been hiding for years in the rubbish of the garret, as vigorous and vicious to-day as when they first emanated from the body of the infected person.

Now, the most important question ever asked of any civilized audience is

WHAT SHALL WE DO TO BE SAVED FROM THESE GERMS OF DISEASE ?

We saw how the germs of typhoid fever were carried in the water, and the purity of your water-supply will be discussed to-morrow night. Not to discuss this subject, let me emphasize the necessity of boiling the water when there is any doubt. I emphasized this this afternoon, and I emphasize it now because I am very anxious to see the enthusiasm of this convention reach the "boiling point." The question was asked this afternoon—should the water be always boiled, or only when there was doubt? You should certainly boil it at times of year when typhoid fever is most prevalent, but why not always? Man has been called the "cooking animal." You remember the lines of Hood: "Ergo, by logic we repute, that he who cooks is not a brute."

The Australian puts a stick down into an ant hill, puts his mouth over the hole, lets the ants crawl up into his mouth, and makes a very good dinner; but civilized man cooks his food. Still, civilized as we are, we insist on taking our water, as Mr. Quilp took his whisky, raw.

We are even behind the Chinese in this respect. They have a filthy water-supply, they live in boats along rivers, and their sewage is emptied into the same river from which they take their water-supply, and yet the diseases spread through a contaminated water-supply are unknown among them, because they always boil the water they drink, and would no more drink it uncooked than we would eat uncooked potatoes.

But the germs of these other communicable diseases enter

the body through the air which we breathe. How can they be destroyed?

You may have heard of many disinfectants, but experience in this State has proved that the

FUMES OF BURNING SULPHUR WILL DESTROY THESE GERMS.

You will find it demonstrated in the reports of the Michigan State Board of Health that during the last three years hundreds of lives have been saved by isolating those sick with diphtheria and scarlet fever, and then, after death or recovery, burning sulphur to destroy the germs hiding in the house. Sulphur has long been a good orthodox disinfectant for the next world; we now know that it kills the little devils in this.

You know it was an old idea that disease was caused by the possession of devils, and that the way to cure disease was to cast these evil spirits out. Our forefathers used to prick the affected part in the hopes of thus letting the evil spirit out, in much the same way that the Indian medicine men now gather about a patient, one playing the tom-tom to scare the devil out, one pronouncing an incantation to charm the devil out, another jumping on the patient's stomach to stamp the devil out. If the devil doesn't kill the patient the doctor usually does. Now disease is caused by the possession of evil spirits—these germs, but these little devils, strange as it may sound, can not live where sulphur is burning.

According to an old French poem, Death once held a prize contest among his various agents, and there were represented among the rest, War, Pestilence and Famine. But according to the poem, the prize went to Intemperance. Without underestimating the evils of intemperance—intemperance which has filled so many homes with misery—I still believe that the best friends of Death and

THE WORST ENEMIES OF MAN ARE THESE GERM DISEASES, which we now know how to prevent. Intemperance causes comparatively few deaths, and there is often the feeling that the poor wrecked life is better in the grave; but over one-third of the deaths which occur in this State are from these germ diseases which we now know how to prevent—diseases which rob of us of our loved ones when they are in the innocence of childhood, the joy of motherhood and the

vigor of manhood, when they are filled with happy, hopeful dreams.

Prevent these diseases, and there will be more of these gray heads which I see about me now. Prevent these diseases and death will come, not as the poet said, "like some untimely frost upon the sweetest flower in all the field," but in the autumn of life and with the gathered grain and when the fruit has fallen from the trees.

Then Death will come as it came to the aged historian Hume, who said in his dying hours that every minute he was growing weaker, but all which he expected to accomplish he had done, and there was no excuse which he could offer Death for staying any longer, who was willing to "let the music stop" when the organ was "worn out." God speed the day when this may be the common end of all—when surrounded by those we love, happy, peaceful and serene, the organ will "wear out," and like the lingering strains of a melody, our lives will pass away.

THE PREVENTION OF CONSUMPTION.

Dr. Baker said that he would speak only a few moments, and yet during the few minutes that he was standing upon this platform, some two or three citizens of the United States—men and women filled with happy, hopeful dreams—men and women to whom life is joy, have surrendered their lives to this destroyer. And yet, though there is no disease which causes so many deaths, there is no disease about which scientific men know so much, and which they could so easily prevent if the people only knew.

A great change has come about recently in opinion as to the relative parts played by heredity and the germ in the causation of this disease. Though the lungs of children of consumptive parents may have a lower vitality and less resisting power, the cause of the disease is known to be a specific germ, and nine hundred and ninety-nine cases out of every thousand are communicated from person to person, and it is these cases which we must prevent. Where does consumption generally first appear? In the lungs, because the germs of consumption are carried to the lungs in the air which we breathe.

Dr. Baker alluded to the fact that the germs of consumption have been found on the walls of rooms where consumptives have been. These experiments have been conducted

by Dr. Cornet, of the Berlin Hygienic Institute. He found that the sponge scrapings from the walls of rooms inhabited by consumptive patients, inoculated in guinea pigs, produced consumption in those animals. Sponge scrapings from the walls of rooms where no consumptives had been did not, on inoculation, produce consumption in the guinea pigs. Now how did the walls of those rooms become contaminated with the germs of consumption? Not by the breath from the consumptive patient. Guinea pigs have been placed in a rubber sack, and they have been breathed upon two hours a day for six weeks by consumptives, without contracting the disease. So, the danger is not in the breath.

Cornet found that where consumptives had invariably expectorated in cuspidors filled with water, the dust from the walls of the room showed no germs; but where the sputa had been allowed to dry on the floor, the germs had risen with the sweepings and covered not only the walls but the pictures, dishes, the bed, and everything in the room—so virulent, as to produce the disease several weeks after the patient had left the room. It is then from the dried sputa of consumptives that this great foe of the human race scatters its seeds. This is proved beyond question. These germs have been found repeatedly in the sputum, in the dried fly specks on the windows of rooms inhabited by consumptive patients, the flies having fed upon the sputa.

Animals feeding on the sputa of consumptives die of consumption. Dr. Cagny tells of a young consumptive who took care of a large number of fowls, and who amused himself by coughing for the amusement of the chickens, which

GREEDILY DEVOURED THE SPUTA.

Many of the chickens died of consumption, and the germs of consumption were found in the dead chickens.

Consumption has been produced by inoculating with the sputa, by swallowing the sputa, by breathing the sputa. The disease has been transmitted to cattle, pigs, sheep, rabbits, rats, mice, dogs, monkeys and men.

When Tappeiner, was causing dogs to

BREATHE THE PULVERIZED SPUTA OF CONSUMPTIVES,
a robust servant of forty laughed at the idea that consumption could be caught in this way. In spite of warnings he went into the inhaling room, breathed the sputum dust, and

got the consumption just the same as the dogs. In fourteen weeks he died of consumption.

Thousands in Michigan every year do unconsciously just what this man did consciously and willfully; and when we think of the ten thousand consumptives in Michigan who every hour in the day are expectorating along our streets and even on the floors of public buildings, post-offices, churches, hotels, railroad cars and street cars; when we think how these germs are being dried and carried into the air by every passing breeze, by every sweeping, and how they are capable of producing the disease six months after drying; when we think of the miscellaneous crowd sleeping in hotel bed-rooms; when we think of the close, unventilated sleeping-car with hangings and curtains so well calculated to catch the germs, and where, as some one has said, the air is as dangerous as in those boxes filled with pulverized sputa where dogs are placed for experiment; then when we remember that man's lungs are a regular hothouse for the growth and multiplication of these seeds of consumption; is it any wonder that one citizen in every seven dies of this disease? And if a human life is worth anything to the State, is it any wonder that the State spends money to hold such conventions as this, where the people may be told how they may destroy these invisible yet almost invincible germs swarming in the air we breathe.

DESTRUCTION OF THE SPUTA.

Now, the object of this discussion is not to make you afraid to breathe, but to make you so dread the sputum from consumptives as to insist on its destruction. Every person after coughing a month or so, and raising sputa, should have a microscopic examination of the sputa both for his own comfort and for the public safety. No consumptive should be allowed to expectorate on the floor or street, and all sputa should be disinfected or burned. The disinfection of sputa has been recommended by the American Public Health Association, by the Michigan State Board of Health and by many other boards, and if it were universally carried out there would be two or three thousand less deaths in Michigan every year.

But you say that you have not the consumption, you can not go around seeing that your neighbor disinfects his sputa; are there no

PERSONAL PRECAUTIONS

which you can take? Yes! It does not follow because we breathe the germs of consumption that we will get the disease. Our lungs may be so healthy and vigorous that the germs will not find a congenial soil. Dr. Trudeau's experiments show that when animals are inoculated, if they are kept in good sanitary surroundings, the disease is sometimes arrested. So post-mortem examinations show that a great many men and women are attacked by consumption some time in life and they recover from it. They have such good food and air and their lungs are so healthy and vigorous that the tubercular process is stopped. Consumption never attacks wild oxen, but it is a great catch for tame elephants and pet canaries, for foreigners who try to accommodate themselves to the food and habits of another race. It yields a higher death-rate in the closely crowded cities, in the great industrial centers, than in the open country. One-half of all the deaths which occur in States' prisons are from consumption, and Ziemssen says that imprisonment for fifteen years is equivalent to sentence of death by consumption.

Any environment which weakens the system or irritates the lungs simply

HARROWS THE SOIL

for the easier cultivation of the seeds of consumption. It may be the irritating dust from the factory, or it may be only a hard cold. All of these unfavorable conditions you may avoid. You may strengthen the body in every possible way. You may go further:

Without considering the question at length, it is known that consumption is a very common disease in cattle and may be communicated to man by the milk which he drinks and the flesh which he eats. Now, you may boil all the milk which is suspected, to destroy the germs, a meat inspector may destroy the flesh of all tuberculous animals, and all of this will do good. But more important than all of this, more important than anything else—let me emphasize in closing—the disinfection of the sputa.

The consumptive should do this for his own good, because, when he continues breathing the germs of consumption from his own sputa,

HE CONTINUALLY RE-INFECTS HIMSELF,

and thus diminishes his chances of recovery. But more

than this, the people should demand it for their own safety. It is more important than to fortify our bodies. It is better to kill the germs before they commence trying to kill us. You have probably heard of the Irishman who swallowed a potato bug and then swallowed Paris green to kill it. If a battle must go on with the germs of consumption, I prefer it to go on outside of my body, and the place to take the germs at a disadvantage is in the sputa.

This plea for the disinfection of the sputa may seem a rather prosaic and commonplace recommendation with which to close a long speech,—something like those long column articles in the newspapers, which picture the horrors of some disease and close with an innocent little line at the bottom,—“Use Warner’s Safe Cure.” But when I think of the thousands who every year are cut off in the prime of life, I sometimes feel that a man could not have a better epitaph written over his grave than this:

“HE TAUGHT CONSUMPTIVES TO DESTROY SPUTA.”

Every day in the week and every hour in the day one citizen in seven is giving to every passing current and to the four winds of heaven those seeds which surely mean a wrecked ambition and an early death to some fellow creature. Every hour in the day that great “reaper whose name is Death” is gathering with his sickle where we, in our ignorance, have sown the seed. And yet a nation which has spent thousands of dollars studying the diseases of peaches and pears, a nation that has spent thousands of dollars to protect its fish and the young seals of Alaska, has never given a dollar for the study or prevention of consumption in men. If Jefferson and the signers of the Declaration were right, and the first object of government is to guarantee to all men the enjoyment of life, surely that work is highest and noblest whose object it is to prolong the lives of millions, and to endow those lives with health and strength.

Mr. Clark then answered questions as follows:—

Question. In case a man sleeps in a room where one of these communicable diseases has been, are there any precautions which he can take the next day?

Answer. Yes. In case the exposure has been to small-pox, the man exposed should vaccinate the next day, because the period of incubation of cow-pox is known to be shorter than the period of incubation in small-pox, and, in

case of exposure to small-pox, vaccination immediately after will work before the small-pox has a chance, and the disease will be modified in malignancy—the patient will have varioloid. After learning that I had slept in a room where there had been case of consumption, I should either disinfect the room with sulphur, or rent another room. The Italians have for some time believed in the contagiousness of consumption, and they will even desert a house where there has been a case of consumption.

Q. I have heard it said that, if one would keep the mouth closed we would be less likely to contract a contagious disease. Is that true?

A. Very likely. The moist nasal passages might stop the passage of these germs. Not that it would be safe to go to such a place, but, closing the mouth, there would be perhaps less danger. I certainly should not go to such a place if I could help it, but if obliged to go, I should certainly keep my mouth shut. You may think that one of the impossibilities, but I certainly should try.

Q. How do you account for those isolated cases, where there seems to be no contagion?

A. I think they are due to our ignorance of all the environment—all the surroundings—all the exposure. I have a case in mind where the exposure was known, I believe, to only one person. In 1874, there was a case of scarlet fever in a house near Laingsburg. The curtains that hung in the room, the doll with which the child played, and some other articles were packed away in the garret. Five or six years later another family moved into the house and cleaned out the garret. Part of the stuff was burned, but the girl took the doll with which the sick child had played, and the two boys took the pictures. In ten days the three children were sick with scarlet fever. Here was a case which, if the circumstances had not been known to one man, would have been called a case of spontaneous origin, as there was no other possible exposure.

Q. How do you account for immunity after the first attack? Why don't we have communicable diseases twice?

A. We sometimes do. People even have small-pox twice, and after having small-pox, vaccination frequently "works." But the immunity may be explained in this way:

It is a favorite notion of modern physiologists that the human body is a sort of body politic—a commonwealth

inhabited by an immense multitude of living cells. These cells work together in the common object of building up the tissues of the body—turning food into muscle and nerve.

These invisible cells have their invisible enemies ; these enemies are these germs of which we have spoken. When these germs of disease gain an entrance to this citadel—the human body—through the air we breathe or the water we drink, they commence what Virchow calls a “struggle” with these cells, and we very properly speak of an “attack” of disease.

Now, as to the question of immunity, the way some put it is this :

The cells have been educated by the first attack so that they better understand the military tactics of this hostile tribe, and thus acquire vital resisting power. Others say that the germ leaves behind it this poison or ptomaine, of which you have heard to-night, in which others of its kind can not live. Probably there is an element of truth in both ways of putting it, but the point of especial interest in this connection is its bearing on vaccination. Whichever of these explanations suits us best, it is enough to know that a conflict with the weak members of one of these malignant tribes fortifies our bodies just the same as a conflict with the most malignant. Now we can weaken these germs, introduce them into our bodies, they are easily conquered by the cells and we are vaccinated. The germs don't lose their nature at all. As some one has said, the rattlesnake has not been changed into a frog—we have simply extracted some of its poison fangs.

Q. Would it not be better to disinfect with the fumes of sulphur in all of these communicable diseases?

A. Yes, the State Board of Health recommends the fumigation with sulphur, even in cases of typhoid fever, though the most important disinfection in this disease is the disinfection of the discharges.

Q. Is there not more danger in a crowded community ?

A. Yes, experiments show these germs to be more abundant in the cities of London and Paris than in the suburbs, and more abundant in the suburbs than in the country. They abound in crowded rooms. It is these germs, as Tyndall showed, which enable us to see the sunbeam dancing in a darkened room. The higher up you go the less the number of germs. Some one has facetiously suggested balloons as a health resort. Between one and two hundred

miles out at sea very few germs are to be found, and sea breezes coming over this distance are comparatively free from germs.

But nearly everything we touch contains these germs. Experiments made with the books in the circulating libraries of Dresden show that where the leaves of the books are turned with the dry finger, not many germs are found on microscopical examination, but where the finger is wet many germs are found. All of these happened to be non-pathogenic germs, but if a child sick with scarlet fever had been reading that book, the disease might have been spread in that way.

Experiments show that the coins and paper currency of Germany are covered with bacteria. In more senses than one it is "filthy lucre." Perhaps your child is carrying in its mouth the penny that has been paid out by a diphtheritic patient.

A Contribution to the Study of the Traumatic Neuroses (Railway Spine).

BY DR. L. BREMER, ST. LOUIS, MO.

Read before the Missouri State Medical Society.

[Concluded from last issue.]

THERE can, of course, be no doubt that a large portion of this money goes to parties who are in no wise entitled to damages, who owe them, not to the gravity of their complaints, but to the deeply-rooted prejudice of the average jurymen against corporations, especially railroads. It seems, indeed, that a new profession (that of "accident victims") has sprung up, and there appears to be danger that it, like the other professions, will soon be overcrowded. It has been suggested by somebody, that the easiest way to make a great pile of money at one stroke is to study the books of Erichsen or Page, then travel on railroads, watch for the time when there is more than ordinary jarring and concussion, while the cars are being coupled, for instance, then fall from the seat, and now go to the doctor and the lawyer with the well-studied subjective symptoms, which nobody can disprove. What such a "sufferer" does not know about railway spine, any symptom that he may have overlooked, will soon be examined into him by the multiplicity of the

doctors whom the professional victim is in the habit of consulting.

But, exceptionally, the reverse is the case. Owing to the ignorance of some lawyers who have not familiarized themselves with the peculiarities of the nervous disorders produced by traumatism coupled with fright, the honest sufferer is sometimes wronged, because his counsel does not understand to lay before the testifying physician or medical expert appropriate questions to elucidate the nature of the nerve trouble for which the plaintiff asks damages. It is, especially, the unsophisticated plaintiff who will appear to his disadvantage in the witness-chair, if the hysterical and emotional side of the case be not fully explained to the jury. Such a man is apt to appear as an impostor, especially when counsel for the defendant knows how to take advantage of the mental weakness of the plaintiff. The line of argument of the opposing counsel generally is as follows: 1st, To prove that plaintiff did not receive the injuries for which he sues, at the time and under the conditions stated; 2d, If he did, it was his own fault, owing to the lack of ordinary care; 3d, That the symptoms of which he complains are the result of a vivid imagination, or, to say the least, that they are enormously exaggerated for the purpose of working upon the feelings of the intelligent jury. Here is a case in point: A coppersmith, 45 years of age, was working in a brass-foundry, when an iron pipe, weighing about forty pounds, fell from a height of about eight feet and struck his head near the junction of the sagittal and lambdoid sutures. The wound healed without any untoward symptoms, and he continued to work. In the course of weeks, however, a painful spot, about an inch and a half square, with an extremely sensitive center, formed. This center, which was in the cicatrix, would, at times, pulsate, causing great suffering. By pressing upon it, or by a draught of air striking it, radiating pains and epileptiform convulsions, followed by mental confusion, could be produced. At times he would feel as if somebody was striking him a sudden blow on the head; this happened especially when he was moving about; the pain of these imaginary blows was bewildering and excruciating, and the patient would, for a minute or two, stand like a statue, dreading to move, lest the blow might be repeated. There was diminution of vision and hearing, cotones and twittering noises in the ear, formication and numbness in

the extremities, a high pulse and occasional fear, grave mental depression; in short, a characteristic symptom-grouping of the traumatic neuroses. In spite of all these grave signs the man looked stout and had a florid complexion. At the time he sued his employers for damages. About two years after the accident he had very much improved. The plaintiff was treated by counsel for defendants as an impostor and lazy good-for-nothing, and, as he made a bad impression on the jury by his over-emotional, unmanly and hysterical behavior, but principally by the fact that his looks seemed to belie the gravity of the symptoms, a verdict was rendered in favor of defendants. His lawyer had not the slightest idea of the nature of the disease of his client. The man will never recover; his working power will be damaged for the rest of his life.

But in order to not draw too gloomy a picture of the ultimate prospects of the victims of concussion and head injury, I deem it proper to relate the following case, as an offset to the preceding one: An iron-worker of about 40 years of age received an injury very similar to that just detailed, except that there was no epileptogenic zone, and that his trouble consisted, principally, in a paretic condition of the left leg. The wailing of his wife, the commiseration of the neighbors and friends, and probably the examinations of doctors and lawyers, had all helped to develop a rather serious case of railway-spine. The man's claim was settled about fourteen months after the accident, but there was no improvement. He continued to remain in bed and to harass his family with his everlasting complaints. This proved too much for his wife. She ran off with another man, taking all the money with her. On the following morning the patient got up, dressed, went out, inquired for and obtained work, and succeeded in making a living for himself and three children. Several years ago he moved out West and went to farming.

If the bold and paradoxical maxim that "figures lie" has at all any truth in it, it certainly can be demonstrated by the statistics on the final outcome of the traumatic neuroses. According to Erichsen's experience almost no case of railway-spine recovers. Page's observations lead him to the very opposite conclusion, and such remarks as "recovered directly after his claim was settled," "has been well since," "soon after settlement looked a totally different man," etc., recur with perplexing frequency almost amounting to regu-

larity. Among thirty-three cases registered by Oppenheim, however, only four or five are recorded as "improved;" the rest figure as "stationary" or "progressively chronic."

The difference as to prognosis existing between Erichsen and Page is easily accounted for. Erichsen wrote his book for the purpose of calling to the attention of the medical profession a train of grave nervous symptoms setting in and developing with progressive severity after comparatively trivial injuries received during railway collisions. The peculiar malady resulting from such accidents was, until then, unknown. He naturally registered only such cases as presented the characteristic symptoms usually met with in the disease under discussion. As a matter of course, his material consisted of accident victims in whom the trouble had become chronic. At the time of the publication of this book the damage-suit nuisance was unknown; persons that suffered but little or got well from the minor forms of railway-spine were not heard from. But one of the results of the appearance of Erichsen's book was the dissemination of knowledge concerning the symptomatology of railway-spine, not only among the physicians, but also among the laity. The nineteen years which intervene between Erichsen's book and that of Page changed the aspect of the subject of railway-spine by the introduction of the element of exaggeration and simulation for mercenary purposes.

Hence the divergence between Erichsen and Page as to the final outcome of traumatic neuroses. The pessimism of the former is counterbalanced by the optimism of the latter; Erichsen is the authority for the poor man, Page for the corporation. But the impartial observer will incline more toward the views of the earlier observer. I think it unjust to charge Page with partiality and subserviency to the railroad interest, simply from the fact that he is in the employ of a large railway corporation; probably he has tried to be as unbiased in his reports as it is possible for human nature to be. But nobody can be entirely objective in his judgment of things and men, and his frequent dealings with impostors may have caused too great a distrust in the genuineness of the generality of railway-spines.

Again, the gloomy statistics of the German observer can not mean that the traumatic neuroses are more formidable in character in Germany than they are in England, that German nerves are more prone to suffer from railroad accidents than English. What the statistical difference really

does mean is that the accident victims in England are more apt to show "litigation symptoms" than in Germany; in other words, that the former country offers better chances for damages than the latter. It has been remarked that in Germany the number of railway-spines before 1870 was exceedingly small, the knowledge on the subject among the physicians very scant. But after the laws had been made in that year regulating the responsibility of employers in cases of accidents, the number of sufferers has enormously increased, entirely out of proportion to any increase in the number of accidents. That matters are a great deal worse in this country, where the average juryman considers it his sacred duty to give a black eye to the railroads and other corporations whenever he can, goes without saying.

It must be admitted that a patient may have been entirely honest in his statements, even if he does get suddenly well after the "golden cure" has been applied, as Dr. Outten puts it. It has been often remarked, what a deleterious influence litigation has on the patient, and how suspense and dread of an unfavorable issue of the suit intensifies and even multiplies the symptoms. This clogging influence removed, the chances for improvement are naturally enhanced. It need cause no surprise, then, that, as soon as a satisfactory settlement is reached, or the suit has favorably terminated, the patient should look like a different man, and should make rapid strides toward recovery. Whether, however, this will ever be attained in its entirety, is another question. My experience, though I must confess it is a limited one, leads me to think that almost invariably there is a flaw in the nervous tone and balance left behind.

An interesting question which still awaits solution is, whether in railroad employes there is a special liability to traumatic neuroses, whether their occupation predisposes them to greater nerve-disturbance under the same conditions than persons following different pursuits in life. I have treated a number of railroad men for neurasthenia of lesser and graver intensity, who claimed that their nervous symptoms were due to the constant though insignificant jarring which their nerves had to undergo, and that they felt better immediately they were off duty or engaged in some other pursuit. I am inclined to think that, among the older railroad men, neurasthenia in some one of its manifestations is extremely common, and that thus they are predisposed to

dynamic injuries of the nervous system in cases of collision.

What is to be done in the genuine traumatic neuroses? Permit me first to say what ought not to be done, and let me illustrate it by relating a case in point: A coal-miner about 40 years of age, was, about three years ago, struck by a falling rock on the right side of the head. The seat of injury, consisting in a scalp wound of no considerable size, was about one and a half inches to the right of the junction of the coronal and sagittal sutures. He was unconscious for a short time, but after he came to resumed his work. He did not feel any very grave symptoms, and worked steadily until the wound had healed up. Then he became dizzy, had darting pains all over the head in a longitudinal direction, starting from the cicatrix; he felt an extreme heaviness and weakness in his limbs, and was unable to walk. To the right side of the occipital protuberance there was an intensely burning spot, about an inch in diameter. The head felt like a lump of lead, and had a tendency to drop forward. The scar was very painful; no depression of the skull.

An operation was performed, consisting in the excision of the painful cicatrix; at the same time a piece of the underlying bone, about the size of a silver dollar, was chiseled out. There was a slight improvement as long as the wound was open. As soon, however, as it was closed, the old symptoms set in again with increased severity. The pain in the new cicatrix and the burning spot in the occipital region were more distressing than before. The head would fall forward whenever he attempted to get up; he had to support the chin, in order to be capable of moving, and he felt comfortable only when resting in the sitting posture and leaning the back part of his head on a support. During the whole summer he had, on account of the heat, to sit in his cellar, and apply ice to his head, this being the only means which afforded him relief and enabled him to live. Spasms in the right leg and the little finger of the right hand (on the same side as the head injury) gave him considerable trouble. When the leg was bent by the spasms, he was unable to straighten it, and the little finger of the right hand was often in a state of hyperextension. Hearing in the right ear was impaired, and there was constantly a bubbling noise in it as of boiling water. The same ear symptoms would appear on the opposite side whenever he

underwent any exertions. Under these conditions another surgeon believed himself justified in boring another hole into his skull, about two inches behind the first one, which, for some reason or other, was kept open for twelve weeks, when a third surgeon sewed it up. The second operation did not make the patient any worse, but left him in about the same condition as before.

When I saw the man he presented all the symptoms mentioned above, and the following additional ones : He is of a ruddy complexion, looks well nourished, and the picture of health. When he gets up to walk he does so very cautiously, holding his head in a way as if any unnecessary movement would hurt him. He walks, supported by a stick, the body bent forward, in a tottering manner, as if drunk. He has become very irascible, and when in a fit of passion feels as if his chest and throat were bursting. Time seems to him immensely long. Thus, when he leaves home for a day it seems to him a week, and the occurrences of daily life seem to be separated by unnaturally long intervals. He can not do a simple sum, confusion setting in during the attempt. His intellect seems clear, but inhibited. His memory is good. He can speak only in a whisper, and is, at times, when fatigued, or after a prolonged effort at speaking, completely aphonic. He has to make signs to communicate with his family. In cool weather he is generally better able to speak, but never with his former natural voice. He is much less able to stoop than before the operation, the brain falling forward and bulging into the hole in the skull.

On coughing and speaking the brain mass seems to bob up and down through the opening, which is covered only by the skin. In walking also the brain sways to and fro. A cotton pad which I applied, to fill out the defect in the bone in order to steady the brain, made matters worse ; he can not bear the slightest pressure on the skin covering the opening. He talks now of having that mythical silver plate inserted in his skull ; and this might indeed be a case in which such an operation (the most formidable one in the catalogue of the laity's surgical superstitions) would prove of some value.

The knee-jerks are increased, on the left more than on the right.

I know of other cases of traumatic neuroses in which, as a last resort, cranial surgery was had recourse to, without

the slightest benefit. It is very natural that, in these times of brain-localization, the surgeon should look to the knife as the only remedy in desperate cases. But, after the labors and laws laid down by such men as Horsley, Bramwell, Bergmann and others, no surgeon should entertain even the slightest idea of operative interference in traumatic neuroses. How many trepanations and other useless operations have been perpetrated on unfortunate sufferers from brain and general nervous troubles, for which there did not exist the shadow of scientific reasoning or even excuse. Surgeons that undertake such operations ought, to say the least, be competent to distinguish between localizing (focal) and general brain symptoms. In the latter, any and every operative interference is, of course, out of the question.

But even in distinctly localizing brain-lesions producing general symptoms, epilepsy, for instance, the results so far obtained are by no means, promising. Such operations have, as a rule, an ephemeral effect; the original trouble returns after months or weeks, unfortunately after the description of the case with the result "Cure" has been given to the medical press, and, in some instances, to the daily papers. We must not forget that operations of all kinds, and the forced rest which they entail, exert a powerful influence on most of the neuroses, especially epilepsy. But they do not cure; they only keep the malady in abeyance for a short time. In the well-established neuroses no brain surgery will be of any avail, any more than castration in hystero-epilepsy of women, an operation which, fortunately, is gradually losing caste among the surgeons.

Even the comparatively harmless and generally justifiable excision of an epileptogenic or painful cicatrix is very frequently of no benefit to the patient, as the following case will illustrate: A student of medicine was thrown out of a buggy, landing with his head on the granite pavement. He remained unconscious for half an hour. A scalp wound in the occipital region was sewed up and healed by first intention. Two weeks after the accident the cicatrix commenced getting painful; there was sleeplessness at night, restlessness at all times, great vasomotor disturbances, a fear of moving, narrowing of the visual field, and great general weakness. The cicatrix was excised, and for several weeks all the symptoms grew better. But in the course of a month they reappeared with increased intensity. Another excision was followed by disappearance of the pain in the

scalp, but the general symptoms persisted, and, for a time, were progressive in character. The patient, unable to apply himself, had to abandon the study of medicine, and lives now, an invalid, on a farm.

What, then, is to be done for the unfortunates that suffer from any form of these traumatic neuroses? The great healing agents are time and a hygienic mode of living. These two agents may be assisted by the judicious application of a weak galvanic current and cold water. It is astonishing how prompt the improvement is in some cases, up to a certain point, if galvanism to the head be employed, and how cold water ablutions will tone up the nerves. But, I repeat, the outlook as to complete recovery of the former tone and vigor of the nervous system is, in the pronounced cases, extremely problematical.

DISCUSSION.

Dr. Shaw objected to the term "neuroses." He believed that the same minute extravasations occurred as in other injuries to the nervous system, and that often a sclerosis, the result of the multitudinous involvement of the arteries. Irritability, loss of memory, impotence, hallucinations, prove the case to be non-hysterical.

Dr. Fryer related a case in proof of the existence of "railway-spine." An army surgeon was struck in the back by a platform; subsequently suffered acute general hyperesthesia and *vesication all over the body*, except the face and neck.

Dr. Mulhall thought that if the testimony of any expert had been proven to be valueless by the courts, it was that of the neurologist. He gathered, from what had been said, that, as a consequence of railway injury, a man may become hysterical, and then almost any neurotic ailment may present itself, such as hysterical aphonia. In the case mentioned by Dr. Shaw, Dr. Mulhall had pronounced the man a malingerer because his vocal cords approximated perfectly and the tension was good, *unlike* the picture of the *hysterical larynx*. With the larynx in such an attitude, and a blast of air, it needed but volition for voice. Dr. Alt with prisms proved his eye symptoms to be fraudulent. When I unexpectedly inserted a pin in his leg, reflex promptly followed. It had always been previously done with his knowledge. He was awarded damages by advice of the

surgical staff without legal suit. The touch of gold was magical, for I have since heard that he was quite well.

Dr. Bremer said the approximation of his cords did not prove that he could use them for phonation. There may be paralysis, as in hysterical cases. Why is it that these patients are paralyzed on one side? Such patients are in a diseased nervous state, approximating hypnotism. The fact that he is paralyzed on one side suggests the idea to him that he should be paralyzed on the other. Thus he may have bilateral paralysis. As to testing the reflexes, fallacy may easily occur. In a case of acute ascending paralysis in a boy who could not move his leg, reflex movement in the leg would occur if one would stick a pin in it when he did not expect it. He was not a malingerer. There was a hitch between the brain and spinal cord. I do not concur with Dr. Shaw's explanation by the embolic theory.

The terms "anæmia" and, "hyperæmia," denoting a distinct unalterable pathological state of the spinal cord, should be abolished. Either may occur, but reaction occurs—it may be several times a day.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illoway,
Cincinnati, Ohio.

ON THE USE OF SIMULO IN CERTAIN FORMS OF HYSTERIA.

BY DR. V. POULET.

Simulo Vichaya was introduced into the therapeutics of the grand neuroses by M. Hale White, Professor of Materia Medica and Therapeutics in Guy's Hospital. It is the fruit of a caper bush which grows in Peru and in Bolivia; but it is not, as had been supposed by the discoverer of its virtues, and as had been repeated after him, the fruit of the *capparis coriacea*. Neither is it the fruit of the *capparis oleoides*. These two species belong incontestably and exclusively to the South of Africa (Prof. Baillon). The plant which furnishes simulo is nevertheless a capparis, but Prof. Thomas Christy has written me, it does not resemble either in its bearing or characteristics any of the specimens of *capparis* extant in the various collections of Europe and America.

It is therefore a species of capparis as yet unknown and unnamed.

The fruit of the capera is a berry enclosing an embryo with folded catyledons. That which bears the name of simulo arrived at maturity, resembles a large English gooseberry of reddish-brown color ; it encloses several small seeds, the color of which resembles that of the fruit.

The capparidæ are related on the one hand to the cruciferæ, on the other to the papaveraceæ.

In general they possess antiscorbutic and stimulant properties, analogous to those of the cruciferæ. And as certain of the cruciferæ possess a manifest antispasmodic action, the ancient reputation of the "yellow wall flower" cheiranthus cheri and the antineuritic properties of the "garden cress" (*Lepidium Latirum*), it is not to be wondered at that certain of the capers should possess very marked anti-nervous properties. In some of the capparidæ this action is developed to the point of toxicity. On the other hand, the capparidæ are related to the papaveraceæ, some of which possess incomparable hypnotic properties.

Up to the present time I have used a tincture of simulo one to eight, made by an English house. The dose is from one to two drachms per day ; it may be raised to as much as f 3ij. But, dreading the effects of the alcohol in nervous affections, I have promised myself to resort to the seeds themselves as soon as I shall have received the package now under way.

Mr. Hale White has employed *simulo* in the treatment of epilepsy. In six cases he obtained a diminution of the number of seizures, and as there is never a question of total suppression without doubt, the beneficial effects of the medicine were limited to that. In one case neither *simulo* nor bromide of potassium were of any utility. The author would not conclude from so small a number of cases that *simulo* is destined to cure epilepsy ; but he publishes his results, incomplete as they are, to call the attention of physicians to this drug, so that others may be induced to try it, and thus the efficacy of the drug be thoroughly learned.

Dr. Larrex reported in the *British Medic Journal*, Vol. I, 1885, p. 1184, that he cured himself of epilepsy by the use of the tincture of *simulo*.

Dr. Eulenberg, of Berlin, has used the drug in three cases of hysteria and in four of epilepsy. The hysterical paroxysms were in no way influenced by it. In the greater

number of the epileptics simulo seemed less effective and more uncertain in its results than the bromides. However, in one case where the bromides in doses of five to eight grammes per day had not succeeded in reducing the number of the seizures below 4—8 per week, the administration of tincture of simulo reduced the number to 2—5 per week, whilst at the same time the patient felt remarkably well, which he had not done whilst taking the bromides.

Dr. Gray at a recent meeting of the Academy of Medicine, New York, stated that he had tried simulo alone, or in association with other drugs, in several cases of epilepsy, and that he had obtained no benefit therefrom, unless it be that usually noted from a change of drugs, ephemeral effects, such as are produced by numerous other drugs.—(Therap. Gaz., 1889, p. 396.)

I myself can not praise it in its results in two grave cases, one of which improved at first by the dragees of bromide of potassium, became refractory to the action of this popular remedy of incontestable efficacy, and the other was accompanied by cerebral disorders characterized by a persistent double amblyopia and by a transitory hemiplegia, which yielded under the use of pills of Inée of Gabon. But nothing can be concluded from so small a number of facts which, moreover, seemed to have been picked from the class of incurables, and in which the doses employed (2—4 grammes of the tincture per day) were without doubt too feeble. Further trials are necessary, and I reserve to myself to avoid in future trials an alcoholic preparation.

In hysteria my trials have been more numerous, more varied, and also more conclusive. In truth, I have not had the opportunity of treating the convulsive type, a form extremely rare and almost unknown among the population of the agricultural and industrial region wherein I practice, and in which the experience already acquired would indicate that it would be of but little efficacy against the paroxysms. But I have obtained very remarkable and very encouraging results in a certain number of cases of hysteria of mixed type, a few of which I shall report.

OBS. I. *Bronchial hysteria treated in vain by the usual remedies, but rapidly cured by the tincture of simulo.*

Miss Julia P., aged sixteen, nervo-sanguine temperament, was operated upon in her infancy for a congenital cyst in the neighborhood of the anterior fontanelle, from which was extracted a tuft of hair. Has a twin brother afflicted with

congenital cataract. Has enjoyed good health, and was perfectly regular, when in October, 1888, she was placed in a convent school. Shortly after, her menses were suppressed, and there supervened an obstinate barking cough, dyspnœa, general weakness, languor, loss of appetite, and development of an obesity abnormal at her age. This necessitated the placing of the patient in the hospital of the convent, where she was treated during the winter by rest, an analeptic regimen and a multitude of drugs, of which the patient was able to use the iodide of potassium, the bromide of potass; also blisters. All this without the least success.

Returning home in April, she was immediately confided to my care. The young patient was melancholic, and had lost all energy. She complained of short breath, of frequent cough, want of appetite, constipation and sore throat. Inspection did not reveal the lost alteration of the pharyngeal mucous membrane, but the right half of the latter had lost its reflex power. The right conjunctive was in a state of anaesthesia, and the same eye was affected with achromatopsia. Polyration of the thorax disclosed several hyperæsthetic points (neuralgic of volleix).

There was also found marked sensitiveness to pressure in the right ovary.

All who had known the young lady previously and saw her now upon her return, were struck by the enormous obesity which had supervened since her illness.

The diagnosis of nervous, hysterical cough, could not be disputed.

I prescribed the syrup of lebron, no effect; the valerianate of ammonia, then arsenic in combination with nux vomica, with broncatic frictions of the body, and the application of a deVigo plaster, with belladonna over the right ovary. Meanwhile her courses returned, undoubtedly under the influence of her removal from the convent. May 26th, I prescribed tincture of simulo three grammes per day, and in a very few days the patient felt better and could take walks. I saw her again about the middle of June.

The cough and dyspnœa had disappeared, as also the anaesthetic phenomena, the appetite returned with her gaiety and taste for work, and what was remarkable, her obesity had greatly diminished, although she ate more than before. From this time on her recovery was rapid and permanent.

OBS. II. *Hysteria, gastric type in a man. Sensitivo-sensorial anaesthesia. Cure of the gastric symptoms under the influence of simulo.*

Armand J., twenty-six years old, lymphatico-nervous temperament, beardless, gardener, born at Hagenan; sick for six years, married, since two years father of a child; was afflicted in the first years of his malady with spermatorrhea, consecutive to frequent pollutions, perhaps to masturbation. At the same time he complained of the dyspeptic phenomena, and of a general malaise of a nervous character. Treated by various physicians and subjected to a good deal of medication, he experienced but little benefit. Hydrotherapy alone afforded him any relief.

He came to consult me about the 25th of September, 1889, complaining especially of frequent alimentary vomiting, which came on sometimes immediately after and sometimes several hours after meals; at night he could eat nothing but a little soup, under penalty of passing a horrible night. Sometimes he is suddenly seized, whilst sleeping, with a very painful suffocation, with violent palpitations. If he bends his leg in bed it becomes almost insensible. Several times he has lost his hearing on his left side, and each time this sensorial anaesthesia lasted one month, after which it as suddenly returned. No constipation, normal temperature, normal heart, neither smokes nor drinks. The patient adds that being a servant, it sufficed for him to change masters, and he would immediately perceive great amelioration equivalent to a cure.

Considering his malady to be of an hysterical nature, I prescribed the tincture of simulo in doses of four grammes per day. October 18th, patient reports marked improvement. The night pains and the vomiting are arrested. I learned latterly that the improvement was permanent.

OBS. III. *Hysteria, mixed type, traumatic recent, accompanied by incessant choreic movements of the head. Immediate suppression of the manifestations by simulo.*

Miss Julia D.; aged fifteen years, regular since her twelfth year, a strong young girl of nervo-sanguine temperament, a metal worker, was thrown against the corner of the bedstead whilst romping with her brothers, and to add to her misfortune, the next day she slipped on the ice in the street and fell backward. Very soon after there came on spasmodic paroxysms, with alternative incessant movements of flexion and extension of the head, trembling of the limbs,

and sensations of constrictions of the throat. These accidents lasted for more than twenty-four hours before my being called, February 12th, 1889. The patient can not take food. Her pulse has acquired a frequency of one hundred; heat moderate; she had menstruated regularly a few days before her first fall.

I found a marked pain on pressure in the right ovary and flank, as also 2—3 intercostal neuralgic points. I directed four grammes of simulo to be administered per day.

Almost magical effect! The spasms calmed from the very first dose, and did not recur.

The next month the patient, though still in bed, is perfectly calm; she has taken food. Shortly afterward she resumed her work.

Obs. IV. Traumatic hysteria, mixed type, non-convulsive. Left hemiplegia and sensitivo-sensorial hemianæsthesia. Amelioration under the influence of tincture of simulo, and complete cure after two electrical sittings.

Miss Mary C., of Frepe, aged twenty-two years, employed in agriculture, nervo-sanguine temperament; no known antecedents of grand neuroses in her family; regular since her fifteenth year; has always enjoyed good health; if perchance there was any neuropathic predisposition in her system, she certainly had an excellent antidote in the daily work required by her calling.

In July, 1888, she fell from a cherry tree, a height of 8—10 metres. Besides the violent emotion, and severe physical and mental shock received by her at the time and felt immediately after the fall, there was no apparent injury.

Soon after her humor changed, and her character became moody. She became melancholy, taciturn, lost her usual energy and ardor of work. Her parents becoming uneasy about her, brought her to me about the middle of August. She thus made a journey of about fifteen kilometres across the mountains without becoming very much fatigued.

The sorrowfulness of her countenance and her taciturnity struck me.

She hardly answered any question addressed to her; did not complain of any special pain, only of a general malaise, sleeplessness, loss of appetite, and an insurmountable repugnance for any household or farm work, in which formerly she took great pleasure. I found hyperæsthetic points in the eighth and ninth left intercostal spaces, and marked

sensibility to pressure in the left ovary. Was this a case of cerebro-spinal meningitis consequent upon the fall?

Or was it not rather a case of hysteria? Certain symptoms, as the development of pain by pressure on the ovary, the cutaneous hyperesthesia, absence of all febrile movement, the ease with which the patient made the long journey afoot, inclined me to make the latter my diagnosis, and I prescribed accordingly valerianate of ammonia and bromatic frictions over the whole body.

The morbid phenomena continued to grow in severity, and very soon the patient would not leave her bed. I was called to her on the 17th of September, and found the following symptoms: Pulse 100, T. 37.3° C. Cold extremities; especially on the left side. Heart normal. Complete left hemiplegia. At the same time the arm and leg are in a state of anaesthesia and analgesia, without the body participating in the loss of sensibility; the phenomena is arrested at the shoulder. On the other hand, the left side of the thorax presents intercostal hyperesthetic points. Taste, smell and hearing are abolished on the left side, and the eye of the same side affected with achromatopsia, whilst the field of vision is notably retracted. The patient has marked sensitiveness, but imperfect, for the transfer was only partial; this led me to believe that she was polymetallic.

Desirous of experimenting with simulo in a case of such gravity, I prescribed 2—4 grammes per day, and stopping all other medication. The effect was a remarkably happy one. Twelve days afterward the parents came and told me that the patient began to use her left limbs, that she was able to get up and walk about her room.

The progress became more marked, and about the end of November she came across in a wagon to see me. As she still complained of some feebleness in her left limbs, I gave her 2—3 electrical sittings, which completed the cure.

Altogether I have seen seven cases of hysteria mixed type, non-convulsive, in which the tincture of simulo proved remarkably efficacious. I must add thereto a case of acute ovaritis, accompanied by intolerable pains, and a case of twin pregnancy, complicated with nervous palpitations, violent headache, and complete insomnia. In the one and the other case in which a neuropathic state evidently dominated, the tincture of simulo worked wonders, and brought complete relief. In epilepsy I find from my own personal observation and that of others, that simulo can not take

the place of the bromides, but that it may be very useful in certain conditions not yet clearly determined, in which the bromides are ineffectual or contraindicated.

Observation is of a nature to inspire us with a belief of the efficacy of simulo in hysterical chorea.

Evidently the alcoholic tincture is a bad form of the drug to administer in epilepsy and hystero-epilepsy. If the daily dose is somewhat elevated, say one to two ounces, a quantity of alcohol is introduced into the system that is hurtful, and that will neutralize all the good effects of the drug furnished by nature.

Finally we can experiment with simulo in large doses without scruples; we need fear no bad effect from its use. It does not appear to influence the pulse or the respiration; it produces no depression, no exaltation of the intellectual faculties, and does not occasion any disturbance of the digestive functions.

If this new drug did render real service in the treatment of cases of epilepsy, which the bromides are powerless to affect; if further experimentation shall confirm my hopes concerning its efficacy in hysteria, the agent introduced by Dr. Hale White will fill an important place in the therapeutics of these redoubtable neuroses.—*Journ. de M. de Paris.*

Selections.

Chronic Cervical Endometritis.

BY J. W. M'CRACKEN, M.D., OF STERLING.

Read before the South Kansas Medical Society, at Newton, Kan., Nov. 11, 1889.

THE disease entitled as above, with its intimately associated morbid conditions, probably requires more study and attention from physicians than any other disease with which woman is afflicted. As woman, from the time she reaches puberty, on through all the mutations of her checkered career, until she passes the climacteric, absorbs a large share of the physician's time and study; so does the above designated disease, and associated ills, demand a large share of the time, labor and thought of the gynaecologist. It would be impossible to intelligently consider chronic cervical endometritis without giving attention to the corporeal extension

of the same disease, also the several conditions that exist either as cause or effect. Cervical endometritis may exist without corporeal, but rarely the reverse. Aran West, Byford, Chauncy D. Polman, T. D. Thomas and others claim that chronic cervical endometritis is the most frequent of all uterine diseases, while its corporeal extension or involvement is rare. Tilt and Klob declare the latter quite common. It matters but little for our purpose as to these fine distinctions as to the preponderance of diseased locality, only so far as it influences our judgment in diagnosis or our adaptation of treatment. In thus electing to place the involvement of the cervical canal prominently before you, I would not forget the gravity of the corporeal trouble when it does exist. Dolins holds "that endometritis is necessarily the starting point of every parenchymatous inflammation of the uterus or peri-uterine tissues, and that when such lesions of these tissues disappear, chronic endometritis usually remains." Dr. Palmer, Am. Sys. Gyn., says: "It is more than probable that chronic inflammation of the mucous membrane of the cervical canal and the exterior of the infravaginal cervix is the most frequent disease of the female pelvic organs." James H. Bennett says "inflammation of the cervix, and especially of the mucous membrane which covers it and lines its cavity, is so common as to form a prominent feature in uterine pathology;" and further, "that such should be the case is a necessary consequence of the anatomical and physiological conditions in which the uterus is placed." Dr. T. G. Thomas claims "that of all the diseases of the genital system of the female, this is without doubt the most frequent, and, although not in itself a malady of dangerous character, may prove the starting point for some of the most serious and rebellious of uterine disorders." The occurrence of chronic cervical endometritis following an acute metritis, subinvolution, areolar hyperplasia, or corporeal or general endometritis is certainly explicable on reasonable grounds. When we take into account the difference in structure existing in the body and cervix, coupled with the exposed relations of the cervix to other parts, as the rectum loaded with hard and faecal matter; the womb pressed down its by increased weight, and the pressure of corset and skirts; the cervix resting on tissues acting to close the os, to the passage of normal or pathological secretions; their retention within the cavity of the neck, with its folded and reticulated mucous membrane

and deeply imbedded glands with thin, patulous mouths. Also from injuries during coitus or labor and the extension of gonorrhreal inflammation.

According to Dr. Palmer the steps in pathogenesis are:

1. Increased and altered secretion, incident to the changes in the Nabothian glands.
2. Erosion of the epithelium.
3. Granular degeneration of the villi of the mucous membrane.
4. Dilatation to the os externum and lower cervical canal.
5. Eversion of the cervical mucous membrane.
6. Follicular ulceration and degeneration.

While this may be the usual order of symptoms in which morbid action is manifest, they are not necessarily present in all or even a majority of the cases which we are called upon to treat.

In regard to the pathology of cervical endometritis there seems to be more harmony than exists among authors in regard to many other morbid conditions. It is primarily a glandular affection or inflammation. The glands of Naboth "become swollen, enlarged, elevated, with dilated mouths, and in consequence there is a hypersecretion." This first is thin, glairy, alkaline, like the white of egg, then thicker, more tenacious, and adhesive; still later, albuminous, loaded with epithelial cells. May change to yellow and be tinged with blood. In the vagina it may be found white and coagulated like hardened white of egg. Its acrid character can not be overlooked; frequently causing erosion of the lower lip (posterior) of uterus. In this disease we have clearly marked predisposing and exciting causes: the former consists of

Natural feebleness of constitution.

The various diatheses and blood diseases.

Impoverishment of system from any cause.

Excessive lactation.

Frequent parturition.

Use of instruments.

Subinvolution and too hasty getting up after confinement.

Acute endometritis.

Versions and flexions.

These various conditions act to disturb the nervous system, interfere with the circulation and nutrition of the lining membrane of the uterus and especially that of the cervix.

Exciting Causes may be enumerated, principally, as follows:

Excessive or intemperate coition.
The use of pessaries, especially stem.
Endometritic puerperal or non-puerperal.
Hard labor and constipation, with a subinvolved uterus.
Efforts at production of abortion and prevention of conception.

Vaginitis, simple or specific.

Excessive manipulation during labor in aid of dilatation.
Laceration of the cervix.

In addition to the usual list of predisposing and exciting causes we have to add the suggestion of a third. Boleris, in An. Uni. Med. Sci. for 1889, considers that it may be due to exterior causes, represented by certain pathogenic organisms or traumatism. Verchère, Annual, as above, holds that all forms of endometritis are infectious, and that they take their origin from a point of infection from some pathogenic organism introduced into the vagina or uterus, and his views are, in a measure, supported by the researches of Winter, who has determined that, while micro-organisms are always found in the vaginal and cervical canal, they do not exist above the internal os except with a diseased mucosa.

Chronic cervical endometritis is often so slow and insidious in its inception and progress, that it may exist for considerable time and the woman be unaware of its presence. Even an abundant leucorrhœa fails to attract attention, and when she is questioned in regard to its existence her answers will be mainly negative, only just enough admitted to keep the physician on his guard and cause him to seek a full investigation, when *all* the facts necessary to a definite diagnosis are easily obtained. One of the first symptoms which usually attracts attention is an excessive leucorrhœa, accompanied by a sense of dragging weight, with bearing down sensation in the pelvis, incurred by standing or walking. This may be accompanied with pain in the back, pain on the top of the head, and all of the above may be aggravated during menstruation.

Tenderness and pain during coitus or an instrumental examination is not necessarily a symptom of trouble in the cervical canal, unless associated with cervical hyperplasia or other form of inflammatory disease.

Menstruation may be deranged, more frequent, less excessive, frequent, painful, with varying character and quantity. As to the influence of the local disease on the constitutional

condition, it will be plainly manifest in time, some sooner than others. All the vital functions are disturbed. Yet notwithstanding the diseased mucosa, the deranged menstruation and disordered general health, conception frequently takes place and healthy children are born at quite natural labors.

Physical Signs.—By touch. The uterus is usually found very nearly in its normal position, though often depressed to the utmost, with the os almost out of neck and patulous. Tenderness is not marked in cases where no complication exists. The cervix may be found enlarged, puffy, nodular and irregular from lacerations. If pain or tenderness is evinced, to any marked degree, a certain amount of inflammation or cervical hyperplasia must be present.

By speculum. The cervix well exposed, the os will be found bathed in secretion, from the typical white-of-egg looking, glairy mucus to that closely resembling pus, with occasional mixture of sanies or shreds of mucous membrane from the body of the womb. An effort at removal of the first described product will confirm the former opinion, if additional proof is necessary, as it will be found very difficult of removal. If the disease has passed on to one in which pus is found, we will probably find abrasion or erosion of the mucous membrane, by removal of epithelium, leaving a reddened and raw looking area—it may be only a limited space, or it may cover a large share of the most dependent part of the cervix. The cervix may present an extreme puffy condition, even to the extent of two inches or more in diameter, without ulceration or abrasion.

The sound. If the sound passes freely into the body of the womb, it may be safely asserted that the morbid action extends to that cavity as well. It is certainly proper, in every case, to make intelligent use of the sound. Where much tenderness is manifest, *great care* should be taken not to do harm, but it is always good practice to make every examination just as full and complete as possible, thereby preparing ourselves for any complication that may arise in the treatment of the case. If great tenderness is found, with hemorrhage easily started, and increased weight of womb, we may be positively certain that, while we may have chronic endometritis, we also have general utritis, or, more concisely, one of areolar hyperplasia according to Thomas; or, if within one or two years after labor, one of subinvolution as a further complication. I would summarize

the most prominent symptoms under two heads: first, those necessary to call for and justify an examination, and those found by an examination. The first class comprises those elicited by inquiry, as follows: a decided leucorrhea extending from one period to another; pain on top of head, disturbed stomach, dragging weight, and bearing down of pelvis, tenderness and pain during coition, and may be vesical disturbance, also deranged menses, or not. Second, upon an examination, digital—the os commonly low down and womb in condition of anteversion, os frequently soft and puffy to feel, or may be of a nodular feel from laceration or enlarged Nabothian glands, tender to touch. Examination with speculum, vaginal walls frequently dark and flabby from loss of tone; os sometimes enlarged to a degree making it difficult to bring into the speculum. May be puffy or very puffy—nodular or hard. Secretion profuse; that already in the vagina being white, a flocculent or lumpy, that hanging from the os of a glairy, white-of-egg appearance and very difficult of removal. The mucous membrane may be eroded or ulcerated; most commonly the posterior lip of the cervix has the most extensive erosions. If a puffy cervix is found, there is generally a patulous os, and where the cervix is hard, or free from cervical hyperplasia, there is most commonly a more natural condition of the os or even a constricted one. The above comprise the principal features of an uncomplicated case of cervical endometritis. Many peculiarities will be met in this line of investigation. We may find a conical cervix, or a pinhole os, with disease confined strictly to the cervical canal, either of which conditions are sufficiently rare to elicit surprise.

Treatment.—It might almost be written as an axiom, that all chronic diseases, however local, soon leave their impress on the constitution, and this being so very true of the disease under consideration, it is eminently proper to first look to the constitutional condition and its treatment. As a rule, we will find a weak condition of stomach, poor appetite and poor digestion, and poorer assimilation, and a consequently defective sanguification. The nervous system will frequently be as manifestly faulty. A tender spine, with perverted sensation, neuralgic pains, and loss of memory, and inability to secure good sleep, will clearly point to cerebral and spinal anæmia as an outgrowth of constitutional poverty, or as one of its prime factors. The above, with obstinate constipation added, will all demand attention. I will give my treatment

in a typical case as above enumerated, hoping some one will present a better line than the one here indicated.

For the constitutional wants,

R.	Syr. hypophos comp. with iron,	5 iv.
	Dil. phos. acid,	5 j
	Pepsin, scale,	grs. xxx
	Liquid malt q. s. ad.,	5 viij

M. Sig. Teaspoonful in water before meals.

Also R.	Quinia sul.,	grs. xl
	Ferri phosphus,	grs. xx
	Zinc phosphite,	grs. x
	Ext. nux. vom.,	grs. x

M. Ft. capsules No. 40.

Sig. One after each meal, or three a day. Electricity (galvanism) to spine. Good food, nutrient qualities, and ease of digestion to be considered.

Or again: Adopt such treatment as will increase the tone of the stomach, improve digestion, promote assimilation, and thus secure good blood, meet the wants of an impoverished spine and nervous system, secure rest and relieve pain. In the above nothing has been taken note of directly pertaining to the condition of the womb. In some cases some form of alterative may be needed; abdominal support, massage, stimulants, bitter tonics, etc. The above, coupled with such hygienic measures as are called for, in dress and local surroundings, and the freeing the mind from the depressing influences, will do much to build up and invigorate the enfeebled system and thereby give better tone to the uterine organs as well as to the nutritive system. While in the general or constitutional treatment, regard has mainly to be had to the condition of the system in a general way, in the local treatment we enter another field, one where we must determine exactly what we have to treat and what there is to immediately complicate the case.

Local treatment.—As an examination with a speculum is necessary to ascertain the exact condition of the parts, so is the instrument necessary in order to apply treatment. The natural aversion to an instrumental examination by most females, and especially the younger ones, is bereft of most of its fear if they can be convinced of two things: that they will not be needlessly exposed nor hurt. And a digital examination should always enable the physician to know whether an instrument could be used without severe pain or not. If not, then the patient should be directed to use

water just as hot as she could bear, with a syringe, several times a day for two or three days before making an examination. I have made examinations where it was necessary to use cocaine solution before an instrument could be introduced. These precautions will well repay the practitioner. After the instrument has been introduced, and the blades moderately expanded, with the cervix brought fully in view, carefully remove the secretions from the vagina and os—remembering that diagnosis and treatment are intimately associated. If there is but little secretion in the vagina and around the cervix, with a normal condition as to size and form of the cervix—with the usual plug of glairy mucus hanging from the os, the case is probably without complications and will readily yield to treatment. Remove the mucus with pledge of cotton or rubber dressing probe, or with a long-nozzled hard rubber syringe, by suction. Be very careful about the use of water to wash this mucus away, as water might be thus forced through the fallopian tubes and cause dangerous prostration. After all mucus and secretions have been removed I am in the habit of using a cone of my own preparation, composed as follows:

R.	Calomel,	. . . . .	5 iij
	Iodoform,	. . . . .	5 i
	Ox. zinc,	. . . . .	5 ij
	Sal. ext. belladonna,	. . . . .	5 j
	Pow'd gum acacia,	. . . . .	5 j
	Aqua q. s.		

M. Ft. cones No. 12.

These when placed in water for a few minutes are sufficiently elastic to yield to a slight flexion or to follow the canal without injury to the delicate and hypersensitive tissues. This is maintained in position by absorbent cotton, or antiseptic wool saturated with boro-glyceride or carbolated glycerine. The patient is instructed to allow this dressing to remain until the next morning, then to remove it and use the syringe with water as hot as can be borne with comfort. The ladies' syringe to be preferred.

This treatment to be repeated once in four or five days, and not to be begun until three or four days after menstrual period ends, and the same interval to be observed in approaching the period. If the cervix is found puffy, enlarged and highly sensitive, the entire infravaginal cervix may be penciled over with iodized phenol or the dark pinus canadensis (Kennedy's). If much sensitiveness is manifest,

rest in horizontal position is advised, and irrigation with hot water is ordered once or twice each day. Where the womb is pressed low by superincumbent viscera, a proper abdominal support is advised, and the patient is directed to assume the knee-chest position for a few minutes when ready to lie down for the night. The new treatment of gonorrhœa opens a new thought in the treatment of endocervicitis, and one from which much good may be reasonably expected—that is, the packing the cervical canal with dry powdered agents, as bismuth, boracic acid, iodoform, calomel, or other alteratives or astringents. The various agents to be properly reduced with starch or other neutral substances. From the valuable results claimed for resorcin in various cutaneous and ulcerative affections, and its ready disinfectant properties, I would expect some very valuable effects from its use in ulceration of the cervix and from glandular involvement of its canal. Galvanic and Faradic currents properly applied are useful in some cases. Also the scarification of the cervix when much inflammation and induration exist. Where extensive lacerations exist, Emmet's or some other form of operation may be performed after due attention has been given to the diseased tissues and glands. With the less grave cases where there is but little eversion, I am inclined to agree with Hœgarath, that it is a question as to its pathological influence, and the operation is of doubtful propriety.

Where the case is one of corporeal, as well as cervical endometritis, some distinct measures have to be adopted. This extension to the corporeal endometrium may be of any grade from the lightest form of exaggeration of the secretory function of the utricular gland, causing uterine leucorrhœa, through all shades of severity and epithelial destruction, to that of complete exfoliation of the lining membrane, and the destruction of the glandular structure and development of small cysts, by closure of duct orifices. In addition to the constitutional measures directed heretofore, we may add such agents as will help to reduce the irritation and inflammation of the mucous structures and other tissues that are more frequently involved than in cervical disease alone. Locally several plans have been adopted: The applications of solids; applications of fluids; injections and the use of ointments. The application of solids is attended with too many dangers to ever become popular. The use of fluid agents with the silver or rubber dressing probe certainly

meets all the requirements, and is not attended with the dangers of either solids or the injection of fluid—the latter being the most dangerous of any of the different forms of treatment. If to be applied at all, it should be with the Molesworth syringe or some form of double canula, allowing free return of fluid. Ointments are not satisfactory and seldom used. Where this condition exists, as discovered, or suspicions confirmed, by the ease of passing the cotton wrapped probe or application through the os internum and into the womb, an effort should be made to remove gently all secretions, and then pass through cervical canal, patulous or dilated, the cotton wrapped rubber, the cotton saturated with such agents as it is desired to use; such as solution of silver, zinc, copper, iron, chromic acid, comp. tr. iodine, pinus can. or hydrastis. Where a chronic metritis, hyperplasia or subinvolution exist as complications of the cervical, they should receive proper attention in connection with the treatment of the other conditions.

There is one agent that I can not pass unnoticed at this place, viz., the curette. There may be a class of cases of corporeal or general metritis where its judicious use would result in good, but in the majority of cases it is used because the doctor can not think of anything else to do for his case. But let the local treatment be with the curette or without it, with solid caustics or liquid astringents, with mild local alteratives or gentle emollients, unless the constitutional conditions are carefully looked after, and every vice and defect remedied, failure will be oftener the reward of our labor than otherwise. And every physician, after making himself perfectly familiar with all the minutia of diagnosis and treatment, should demand perfect advisory control of his case before undertaking its treatment, to make success assured.—*Kansas Med. Jour.*

Philadelphia County Medical Society.

Dr. Chas. B. Williams read a paper entitled :
“A STUDY OF ANEURISM OF THE PULMONARY ARTERY, WITH
REPORT OF A CASE.”

DISCUSSION.

DR. J. P. CROZER GRIFFITH.—I had the opportunity of examining this case during my term of service at St. Agnes' Hospital, and though I was unwilling at the time to commit

myself to a diagnosis of subclavian aneurism, and did not feel sure that this existed, I am forced to say that the possibility of the presence of an aneurism of the pulmonary artery did not come into consideration. This case teaches that we should never be lead astray by the fact that a certain disease is a rare one, but that its possible existence in any case under examination should always be taken into account. I was forcibly impressed by this some years ago, during the frequent observations made on a case of ulcerative endocarditis, in which the lesion was supposed to be situated in the ntrial valve; the possibility of its being a tricuspid lesion, as the autopsy later showed it to be, not having been thought of. And, as in that case, so here, it is instructive afterward to review the symptoms, and to endeavor to determine whether it would have been possible to have drawn a correct conclusion from these and the physical signs.

Very little is written in the text-books regarding aneurisms of the pulmonary artery. Cutler, in the *System of Medicine*, by American authors, says that it is of such rare occurrence that it may be merely mentioned. The symptoms of the affection are those described by Dr. Williams, but unfortunately, only a few of them are present in any given case. One patient will have lividity, another dyspnoea, another the peculiar thrill, etc., and in fact, there are seldom or never enough symptoms in combination to render the diagnosis easy. I do not now remember the condition of the pulmonary second sound in the case reported, and I do not think the report mentions it; although I am sure that some reference is made to it in the original notes of the careful examination which I tried to make of the patient. This condition of the pulmonary second sound is a matter of great diagnostic importance.

The diagnosis rests between aneurism of the pulmonary artery, aneurism of the descending portion of the arch of the aorta, and aneurism of the sub-clavian artery.

The position of the dullness might indicate the latter, yet aneurism of the pulmonary artery would occupy about the same position, and that of the aorta might reach the chest wall at the same place. Thrill could occur in any of these aneurisms, and a systolic murmur might be heard in any of them, or might be entirely absent. I believe it was Stokes who raised the doubt as to a murmur heard over the aneurismal sac being at all a symptom of aortic aneurism.

He examined a large number of museum specimens of aortic aneurism, and compared them with the clinical histories of the cases. In every case in which a murmur over an aneurism had been recorded during life, disease of the aortic valve was found post-mortem; and, conversely, in those cases in which no such lesion existed, no aneurismal murmur had been noted while the patient was alive. He therefore suggested that it was at least possible that the murmur was simply a transmitted murmur from the diseased valves, and had nothing to do with the aneurism. In the specimen exhibited this evening, I notice that the leaflets at the pulmonary orifice are decidedly diseased; and the case history reports, as you remember, a murmur.

One point which might aid in the diagnosis is the location of cardiac hypertrophy — whether the right or the left side is involved.

There was no marked dyspnoea or lividity in this case, and whatever existed could be explained as well by the presence of phthisis, from which the patient was suffering.

In aneurism of the aorta we would expect a ringing, aortic second sound, probably more distinct over the tumor than over the aortic cartilage. In aneurism of the pulmonary artery, on the other hand, we would look for accentuation of the pulmonary second sound. Such an accentuation, however, does not necessarily indicate aneurism. It is commonly met with in children in perfect health, and it is an attendant on any condition that produces increased tension in the pulmonary circulation. I think that the only way in which we could have reached even a probable diagnosis in this case would have been by detecting evidences of hypertrophy of the right side of the heart, and an accentuation of the pulmonary second sound; and in reviewing the matter, I can not feel that we should reproach ourselves in the least for the failure to make a correct diagnosis.

DR. G. G. DAVIS.—The importance of the differential diagnosis in these cases is evident. If, under the supposition that the aneurism were one of the sub-clavian artery, that vessel were ligated, the operation would be useless, and the patient might possibly lose his life. The only additional point in diagnosis which I see is that aneurism of the pulmonary artery involves the deeper structures, and is not so apt to give rise to the anterior chest symptoms as usually occur where the arch of the aorta or its branches are involved.

DR. JOHN B. ROBERTS.—It seems to me that the interest in this case does hinge largely upon the diagnosis. None of the gentlemen who examined the case three or four years ago suggested the possibility of aneurism of the pulmonary artery. When the case again came under my observation, six months ago, it seemed to me questionable whether the sub-clavian artery was the seat of aneurism. I was led to this opinion by the fact that he had lived so long with considerable comfort, and the fact that there was no bulging forward of the ribs or sternum. I did not even then think of aneurism of the pulmonary artery, but was inclined to think that it was some form of vascular sarcoma.

The surgical bearings of the case are very important. After he left St. Mary's Hospital, I strongly advised operation, but he declined. If he had accepted the operation, he probably would have died. This case shows that conservative surgery is sometimes the best surgery. Patients with internal aneurisms may live comfortably a long time, provided they do not have to do heavy work. I believe that aneurism is a good deal like heart disease. There are aneurisms and aneurisms, just as there is heart disease and heart disease. I recall a somewhat similar case which was published in a journal a few years ago. Aneurism of the sub-clavian was diagnosed, and operation performed. The patient died, and no aneurism was found.

DR. M. PRICE.—I would ask Dr. Roberts if he ever saw a case of sub-clavian aneurism where there were not some external and positive symptoms near the artery? Is it exactly conservative surgery to tie the subclavian artery without some external symptoms of so serious a condition?

DR. ROBERTS.—In this case there were external symptoms of subclavian aneurism. There was dullness under the clavicle, and there was a distinct thrill when you placed the hand under the clavicle. There was a marked difference between the radial pulses on the two sides. During one period of the treatment the right pulse was barely perceptible. As subclavian aneurism progresses, it nearly always bulges up into the neck and outward through the ribs. It was the absence of this, after several years' progress, which led me to doubt the correctness of the diagnosis.—*Weekly Medical Review.*

On Pilocarpine in Deafness.

Dr. FIELD thinks the remedy useless in senile deafness, and attributes to it the many failures of the treatment reported, due to the fact that the patients have been over sixty years of age. He says:

"I would ask the profession to suspend their judgment for a time on this question, as to the efficacy of pilocarpine injections in labyrinthine disease, and even in chronic catarrh of the middle ear without Eustachian obstruction. I have had more successes than failures in my own select cases, and I am continually hearing of encouraging results from others."

He reports three new cases.

"1. A medical man consulted me some time ago, and said he was so deaf that he was afraid he must give up practice. I suggested he should try pilocarpine injections for six weeks. He now writes (July 7th): 'I used the nightly injections for six weeks, with almost a complete cure; you can not think how thankful I am for the restoration of my hearing.'

"2. A lady, aged thirty-four, very deaf for fifteen years, writes: 'I am glad to say I have received much benefit from your treatment. I can now hear general conversation and take part in it; I can also hear musical instruments playing in the streets and the minister speaking from the pulpit, and also have less noise in my ears.'

"3. A lady who had been deaf for seventeen years, unable to hear without a trumpet, writes: 'On the first day I was injected I was unable to hear a watch or clock tick. On the ninth day, noticed sound in my own voice; on the fifteenth day could hear my own watch tick for the first time for eight years; twenty-second day noticed immense improvement, heard bells, knocks, watch two inches distant from right ear, and faintly at left; fiftieth day, continued improvement; fifty-seventh day, heard sermon with trumpet; sixty-fourth day, heard sermon without trumpet.' She remarks on the general result: 'Immense improvement in hearing; can now hear all the clocks in the house tick. Much easier to maintain conversation with one person. Much more conscious of sounds in the house.'"

Dr. H. M. Jones says, in my "Practitioner's Handbook on Diseases of the Ear," is the following: "It is a question if we avail ourselves of the action of pilocarpine as

frequently as we should. It is probably the most certain and powerful of all our drugs in cases suitable for its administration, where the reduction of a vascular tension is our object, and in which we desire to check effusion and control the tendency to extravasation. These are exactly the conditions in the earlier stages of Ménière's disease and other forms of vertigo in which labyrinthine effusions are threatened. I may add that I first used pilocarpine subcutaneously in labyrinthine vertigo in 1879. I have since (as in a remarkably successful case of typical Ménière's disease, referred to in my 'Handbook' in 1885) repeatedly advised and resorted to the use of pilocarpine in labyrinthine vertigo. My success has been marked in some instances, and failure as complete in others has followed its employment. I may say in conclusion, that notwithstanding my unfavorable relations with this drug in one memorable case, I consider, as a reducer of vascular tension, especially in ocular hypertension and effusion, when given subcutaneously in appropriate cases, it stands unequalled, and that prudently administered, it is as safe a remedy as any other powerful therapeutic agent we are daily using for other therapeutic indications."

Dr. H. Barrett has used it in four cases. These occurred in the persons of three gentlemen, whose ages varied from forty-five to twenty-three, and one lady, aged twenty-one. In each case the treatment was continued for six weeks, and in each of the male cases material improvement was effected. In the lady's case, he could not find any worth mentioning. It was not merely that he detected improvement in the three male patients by the usual methods of testing, but they expressed themselves as hearing with much greater facility.

His experience with the small number of cases mentioned led him to believe that the full benefit of the treatment could not be gained in a less time than six weeks; and it is probable that in many cases an even longer period would be better.—*Br. Med. Jour.*

SULPHONAL.—Mr. Ernest Lovegrove states that the effects of sulphonal upon patients is very discouraging. He finds that for several hours after taking the drug no appreciable effect could be observed, but during the greater part of the following day there was extreme drowsiness, also considerable cyanosis. The best mode of administering sulphonal is to mix it with pulv. tragacanth co. and water.—*Bris. Med. Jour.*

Proceedings of the San Francisco Microscopical Society.

THE GERM THEORY.

ABSTRACT OF A PAPER READ BY PROF. JOSEPH LE CONTE, OF THE UNIVERSITY OF CALIFORNIA.

(Reported for the CINCINNATI MEDICAL NEWS.)

The first meeting of the San Francisco Microscopical Society for the month of March was held Wednesday evening, March 12th.

The names of R. H. Freund and John D. Coulie, residents of this city, were proposed for membership.

The special discourse of the evening was then delivered by Prof. Joseph Le Conte, of the University of California, his topic being "The Germ Theory of Disease." All decay, he said, was accompanied by, and caused by, micro-organisms, and its rapidity depended upon, and corresponded with, the rapidity of the development of those organisms. If the latter were absent, decomposition would not and could not take place. By the successful practical application of this fact a great industry has sprung up—that of canning and preserving of fish, fruit, vegetables, and other putrescible substances.

The overwhelming importance of the process of decomposition in the economy of nature was alluded to. Without it there would be no change. The material from which organic matter is taken is comparatively small, and if it were not broken down and set free by decomposition, thus making it available for re-combination, the time would soon come when life could not continue.

The germ theory is in harmony with the laws of life, and these are universal in their application. Man was formerly studied apart, but anatomy was never a thoroughly satisfactory science until it became *comparative anatomy*, and such was also the case with physiology, embryology, psychology and pathology, all of which had to be *comparatively* considered and studied.

A large proportion of diseases of organisms, both animal and vegetable, are parasitic, and many instances were cited in support of the assertion. The remarkable analogy existing between the phenomena of contagion and those of life in general was alluded to. Science, however, is not content with probability based alone on analogy. It must have in-

ductive proof, furnished by observation and by experimental demonstration.

The various objections which have been urged against the truth of the germ theory were recounted and refuted. It was stated to be undoubtedly true, however, that it had become necessary to modify in many important particulars the original sweeping claims of the advocates of the germ theory. For instance, it was now admitted that many grave symptoms were not the direct result of microbian multiplication, but of by-products thereof, viz.: ptomaines. These ptomaines are chemical poisons—organic alkaloids of albuminous decomposition. A familiar example was found in septic poison, which is a by-product of the multiplication of septic bacilli.

Albuminous decomposition is constantly going on in the presence of cell life, resulting in the production of leucomaines, which are also deadly alkaloid poisons, but are not detrimental to the body in which they are produced, because they are normal products, and the body is adapted to eliminate them. Experiments were detailed, tending to show that the liver is in all animals the great eliminating organ. It decomposes the noxious alkaloids and renders them innocuous. The action of phagocytes, such as the white corpuscular elements of the blood, was then alluded to and explained, as also the application of the principles of the gerin theory to sanitation, to surgery, to medication, and to vaccination by ptomaines.

In conclusion, the distinguished speaker drew a vivid picture of the heights which science would undoubtedly yet attain in the extension and practical application of the great truths of the germ theory. He was unanimously accorded a vote of thanks for his very interesting lecture.

After the reading of the paper by Prof. Le Conte, the President invited discussion and remarks, which was generally entered into by the members, and resulted in eliciting further interesting facts and opinions.

Dr. J. H. Stallard exhibited, as pertinent to the subject of the evening, a pure culture of *Bacillus lepræ*, started in 1886, and several slides of what was practically a pure culture of *B. tuberculosis*, taken in enormous quantities from the lung tissue of a human subject. These were shown in excellent style by the aid of a fine Powell and Lealand $\frac{1}{12}$ oil immersion.

The effects of parasitisms, as shown by the attacks of fungi

on the coniferous vegetation of the Sierras of California and Nevada, was adverted to, and was compared with the ravages of similar diseases of grape and hop vines, and of fruit trees. It is claimed by some that recent investigations point strongly to the conclusion that members of the plant world succumb to such diseases only when weakened either by injury, by an excessively prolific growth, or by the pruning knife and forcing methods of the husbandman.

The next meeting of the Society will be held on Wednesday evening, March 26th. A paper for that meeting has been promised by Mr. C. H. Eigenmann, the topic of which will be announced in due time.

WILLIAM E. LOY,
Recording Secretary.

DETECTION OF SPECIFIC MICROBES IN SYNOVIAL FLUID.

—Smirnoff has recently published an interesting dissertation (St. Petersburg, 1889), in which he describes his examination of synovial fluid removed from articular cavities. He has found that not infrequently in the course of an infectious disorder the pathogenetic microbes may be detected in the synovia. His investigations embrace fifty-one cases, including erysipelas, pneumonia, abscess, phthisis, typhoid fever, diphtheria and gonorrhœa. In some cases the search proved negative, while in other cases not only was the specific micro-organism present, but other microbes were also detected, showing that a secondary infection had occurred. Thus, for example, he sometimes encountered, in addition to the gonococcus or pneumococcus, the staphylococcus or streptococcus. Transportation of the germs, from the seat of primary deposit to the joints, occurred either by way of the blood or lymph-vessels. The frequency of articular invasion seems to depend upon the size and the form of the bacteria. The small round or oval forms, such as the pneumococcus or gonococcus, obtain much more ready entrance than the rod-shaped, even if these latter be very small, as the tubercle bacilli, while the larger, as those of anthrax and relapsing fever, are unable to penetrate the joints. The results of his studies in croupous pneumonia are noteworthy. Smirnoff examined twenty-one cases of pneumonia, and in fifteen obtained positive results. In five out of nine cases of uncomplicated croupous pneumonia, diplococci and streptococci were found in joints. In another case, aggravated by pulmonary gangrene, staphylococci and streptococci were present. In one case of erysipelas the pathogenetic germs were

found in the metacarpo-phalangeal joints of the erysipelatous left hand. In the case of a man who had died of erysipelas enormous colonies of cocci were found in the right shoulder and knee-joints. The fluid injected into rabbits occasioned erysipelas migrans. In the left knee-joint of a case of diphtheria were found microbes exactly resembling the rod-shaped bacteria of Loeffler.—*Wien. Med. Blätter.*—*Med. Bull.*.

Gleanings.

USES OF VALERIANIC ETHER (VIAL).—Valerianic ether, first discovered by Otto, was first applied as a therapeutic agent by the distinguished chemist, Vial. The *pure* valerianic ether, prepared by M. Vial, is less volatile than ordinary ether, and has the appearance of a heavy, colorless oil; its density is 0.894 at 13° C.; the odor is penetrating, and the taste recalls somewhat that of a lemon. In this concentrated form, however, it is unfit for internal use, and, on this account, its strength is attenuated by the addition of sulphuric ether, which gives a better preparation of *medicinal* valerianic ether (Vial), which is perfectly safe and reliable. As a prompt anti-spasmodic, this preparation is best dispensed in the form of a capsule containing about four drops, which is easy to swallow, and well adapted for preserving its full activity for any length of time.

The valerianic ether contained in such capsules is less volatile than ordinary ether, its effects are more energetic and permanent, while it is certain in its action and more convenient to administer than valerian.

The following quotation, from the *Tribune Medicale*, indicates the cases in which its administration is most generally indicated:

"First used in epileptic hysteria with good results, it was shown that it might be applied equally well in simple cases of hysteria. Before and during the functional excitement of menstruation, characterized by weak pulse, giddiness, vapors, spasms, muscular trembling, and nervous irritability, it renders considerable service. It may be safely recommended to ladies susceptible to such accidents, and in those general cases of nervous excitability, characterized by neuralgia, nervous headaches, or migraine, cramps of the stomach, digestive troubles, nervous retching and vomiting."

We have been using Vial's Capsules of Valerianic Ether, manufactured by Messrs. Ricaud & Chapoteaut, of Paris, and have been so well pleased with them in the classes of cases indicated, that we feel that this note about them may be useful to others.

From four to six capsules may be taken daily, according to intensity of the attack. One or two capsules should be taken at a time in a spoonful of water a little before the attacks, if they occur at repeated intervals.—*Va. Med. Monthly.*

PRESCRIPTION FOR RICKETS.—Kassowitz prescribes the following mixture for children suffering from rhachitis :

R.—Phosphorus	$\frac{1}{6}$ grain.
Lipanin	7½ drachms.
White Sugar, { of each . . .	3½ drachms.
Acacia,	
Distilled water	1¼ ounces.—M.

One teaspoonful three times daily.—*Der Kinder-Artz*, January, 1890.

A NEW TREATMENT OF ANEURISM.—Our Glasgow correspondent sent us last week a short account of a demonstration by Dr. MacEwen of a new method of treating aneurisms. Needles are passed into the sac in such a way as just to touch the lining of the opposite wall. The oscillation of the needles causes a succession of fine scratches "on the inner surfaces of the endothelium, irritating it slightly, and leading to the proliferation of the leucocytes," which develop into a white, fibrous mass. It is certainly difficult and probably unsafe to criticise a method of treatment without a knowledge of all the details, which were no doubt forthcoming at the meeting at which the demonstration was made. For example, we do not know if this method has been tried in a human subject, and whether the results have been submitted to a careful examination. But, judging from the brief account quoted from, this method does not commend itself to us. We can not think that it is based on right principles. Of course, we need not say that in aneurisms coming under a surgeon's notice there is no endothelial lining of the sac, and that in the majority of cases there is more or less blood clot or laminated fibrin. We can quite imagine that the scratching of the needles might be useful in starting fresh coagulation, and so leading to the consolidation of the aneurism. But it would require enormously strong evi-

dence to prove that proliferating leucocytes could organize into a firm mass of connective tissue amid the tumultuous flow in a large aneurism. And it also seems clear that the layers of laminated fibrin within the true sac of an aneurism are a very serious obstacle to organization of any material within them. Other practical objections to this plan of treatment are the possibility of causing ulceration of the sac, or acute inflammation of the surrounding tissues, and also the difficulty of adjusting the needles with sufficient precision.—*Lancet.*

THE HYDROFLUORIC ACID TREATMENT OF PHTHISIS.—In a paper, read before the Buda-Pesth Medical Society, a short time since, Dr. Ludwig Polyak gave an account of some trials he has been making of the hydrofluoric acid treatment of phthisis. Care was taken to eliminate as far as possible the disturbing influence of climate, by selecting only patients who had been for some considerable time in Gorbersdorf, where the investigation was carried out. Again, all the five cases treated were in a tolerably stationary condition, but none were taken in which tubercle bacilli were not distinctly present in the sputa. Altogether, each patient was given from forty-five to fifty inhalations. At first only fifty litres of impregnated air per patient were admitted into the room during the sitting of an hour's duration. This amount was gradually increased until during the latter sittings as much as five or six hundred litres per patient were admitted. The subjective sensations seem to have been very disagreeable, for all the patients complained of a smarting sensation in the eyes, the nose, the pharynx, and the chest, which last is described as a somewhat severe pain. The cough and expectoration also increased, and in more than one case haemorrhages occurred. Again, all the patients complained of headache and loss of sleep. The physical results were as follows: In every case the bacilli increased and the condition of the lungs became worse; in four cases the body weight decreased from half a kilogramme to three kilogrammes, increasing only half a kilogramme in one case, where, however, the other symptoms had undergone a change for the worse; in three cases the exacerbations of temperature increased to a very marked extent; in four cases the vital capacity diminished; and in the remaining case, though it increased a little, the infiltration of the lung augmented very decidedly. From the above it would appear

that, so far from exercising any beneficial influence on the disease, the inhalation of hydrofluoric acid proved hurtful in every one of the five cases in which it was tried.

THE EARLY RECOGNITION OF CANCER OF THE CERVIX UTERI.—Impressed by the frequent complaint of patients in the New York Cancer Hospital that their attending physicians never told them that anything serious was the matter until their condition had become hopeless, and convinced that general practitioners need to be taught that the successful treatment of uterine cancer depends on *their* early recognition of its presence, Dr. Coe gives in the *Medical News*, February 16, 1889, the result of his observations upon this subject, attempting to combat certain fallacies which are generally accepted, and to point out certain reliable points in the early diagnosis of the disease. Over one-fifth of the recorded cases occur in patients under forty years of age. The disease may reach an advanced stage without producing cachexia. Many, in fact, most, of the patients at the hospital have been singularly free from pain, which, when it does occur, is a later symptom due to peritonitis. Profuse, foul, watery discharge is not always present, even when there is extensive ulceration. Slight, irregular haemorrhages, occurring *after coitus*, or in the inter-menstrual period, should arrest attention, as they frequently result from incipient cancer. Premature climacteric haemorrhages (between thirty-five and forty) are usually pathological. In all cases in which a patient over forty years of age seeks advice with symptoms (specially haemorrhage) referable to the pelvis, a careful examination should be made. The pain attending incipient epithelioma may be sharp, or merely a dull backache, or a neuralgia of adjacent nerve trunks, as the sciatic. Hypertrophy and general induration of the cervix, accompanying an erosion which bleeds easily when touched, should lead the physician to excise a generous wedge of the suspected tissue, including both the mucous membrane and the subjacent muscular tissue, and to submit this to microscopic examination. Excision of the cervix should be performed in every case of extensive erosion with general induration, whether cancer has actually developed or not.

DERMOID CYSTS OF THE INTERMAXILLARY CLEFT.—M. Lannelongue has recently described cases of this rare pathological condition. The cleft is formed by a bifurcation of the first branchial arch forming the maxillary process, but

the bones developed in these secondary arches do not naturally unite, hence the inclusion of the integument so common at the site of the fronto-maxillary cleft is almost unknown in the maxillary region. M. Verneuil has described a case where, in a young woman, aged twenty-five, a tumor projected under the skin in front of the masseteric region and into the mouth. It was taken for osteitis of the superior maxilla. After two or three months' treatment, a lock of hair was brought away from the interior of this tumor, which was removed. The tumor was then found to be made up of a main and true dermoid cyst, with smaller cysts, which M. Lannelongue held to be mucoid. That observer has seen two similar cases. One was congenital in a man, aged twenty-nine. It was of the size of a nut, and lay just in front of the masseter. The second case was that of a girl, aged eighteen; a tumor which had been observed for eight months, lay about half an inch from the inner aspect of the cheek. No doubt certain cases where supposed sebaceous cysts have been laid open through the buccal mucous membrane, much foetid discharges resulting, were examples of congenital dermoid cysts of this class. The hairs may be short and fine, as is frequent in the far more common congenital dermoid of the orbit.—*British Medical Journal*.

HERPES MENSTRUALIS.—Contrary to many writers, Bergh (*Monatshefte f. praktische Dermatologie*) believes herpes genitalis to be as frequent in woman as in man, his opinion being based upon the observation of eight hundred and seventy-seven prostitutes in Copenhagen. Among these cases he noted six hundred and forty-four cases of herpes occurring about the menstrual period. With some women herpes was an invariable accompaniment of menstruation; with others it only occasionally appeared. The cause, he believes, is a disturbance of innervation. The most usual seat was on the labia majora and adjacent parts; in five the uterus was involved. In a few the eruptions appeared not only on the genitals but on the face. The author does not believe that herpes appears only in those who have suffered from venereal diseases, as he has seen it in women without a venereal history.—*Centralblatt fur die medicinischen Wissenschaften*, February 22, 1890.

A CAUTION IN COCAINE ANÆSTHESIA.—Several instances have been reported in which well-marked manifestations of erotic excitement followed the use of cocaine as an anæsthetic, especially in females. Surgeons, when proposing to operate upon a woman, would do well to have this in mind, and for its medico-legal bearing it would always be wise to have at least one female friend of the patient present as well as the usual medical assistants.

PREVENTION OF TUBERCULOSIS.—After a prolonged discussion of the subject, the Paris Academy of Medicine has adopted the following resolutions concerning tuberculosis:

1. Tuberculosis is a parasitic and contagious disease, caused by a microbe found in expectorations and carried in the form of dust.

2. It is advisable to destroy these expectorations by means of boiling water and fire.

3. The parasite is also sometimes found in the milk of tuberculous cows, for which reason it is not prudent to use milk unboiled, especially when it is intended for the food of young persons.

4. The Academy directs attention of the authorities to the dangers which tuberculous persons create for the communities in which they live, such as colleges, barracks, large commercial establishments and government workshops.

SALOLIZED COLLODION FOR RHEUMATIC JOINTS.—The following prescription, to be used as an external application in acute rheumatism, is quoted by the *London Medical Recorder*:

R.—Salol,	} of each	. . . . .	4 parts.
Ether,		. . . . .	30 parts.—M.
Collydion		. . . . .

As a local application in neuralgia, *L'Union Medicale* recommends the following:—

Ry.	Alcohol. camphor.,	. . . . .	p. 90
	Æther. sulphuric.,	. . . . .	p. 30
	Tinct. opii,	. . . . .	p. 6
	Chloroform,	. . . . .	p. 20

Saturate a flannel with it and lay it over the painful part covering with an impervious material. /

BENEFICIAL EFFECTS FOLLOWING ARSENIC POISONING.—A remarkable instance in which beneficial effects followed a poisonous dose of arsenic is published by a Hungarian practitioner in the *Gyogyaszat*. The patient was an excessively backward and delicate child, who, though two and a half years of age, had only recently learned to walk, and that very badly. He was also able to talk very little, and was of a very unsociable disposition. About the age mentioned incontinency first of urine and then of faeces came on, and though all kinds of remedies were tried, the cold water treatment included, nothing appeared to produce any effect. By some accident the child got hold of some rat poison, the chief ingredient of which was arsenic, and swallowed enough to produce serious toxic symptoms, which lasted for five days. As soon, however, as these symptoms passed off, Dr. Herz was much astonished to find that an improvement little less than magical had occurred in the child. His dirty propensities ceased, he easily learned new words, and was ready to make friends with anybody.—*Lancet*.

Book Notices

A TEXT-BOOK OF OBSTETRICS; Including the Pathology and Therapeutics of the Puerperal State. Designed for Practitioners and Students of Medicine. By Dr. F. Winckel, Professor of Gynecology and Director of the Royal Hospital for Women; Member of the Supreme Medical Council, and of the Faculty of Medicine in the University of Munich. Translated from the First German Edition with the permission of the Author, under the Supervision of J. Clifton Edgar, A. M., M. D., Adjunct Professor of Obstetrics in the Medical Department of the University of the City of New York. One Hundred and Ninety Illustrations. 8vo, pp. 927. Cloth. Philadelphia: P. Blakiston, Son & Co.; Cincinnati, R. Clarke & Co. Price: Cloth, \$6.00; Sheep, \$7.00.

The *Edinburgh Medical Journal*, in reviewing Winckel's work on Obstetrics, says: "Winckel's name and well-known reputation are a sufficient guarantee for the quality of any work coming from his pen, and we owe a debt of gratitude to the translators for their labor in placing the work within our reach, and to the publishers for their enterprise,

and for the skill and success with which the numerous illustrations have been reproduced."

Says the *British Medical Journal*: "Dr. Winckel's work well deserves translation into English. A very large number of treatises and text-books on Obstetrics have been written by British and American authors, but hardly one of the type of Dr. Winckel's."

A work that has been the subject of such encomiums as we have quoted from two such leading medical journals of the world as the *Edinburgh Medical Journal* and the *British Medical Journal*, does not need any further commendatory remarks. We will say, however, that it is the best work on midwifery with which we are acquainted. If consulted by a medical student, or a physician, what work on obstetrics to procure in preference to others devoted to the same department of medicine, we should advise him to get Winckel's. Its descriptions of conception, pregnancy, mechanism of labor, manipulative processes, instruments, etc., we consider superior to those of other works. The author states in the preface that, in writing the work, he kept in view making pathology and the management of labor prominent features.

We feel sure that there will be a large demand for the work in this country.

THE NEUROSES OF THE GENITO-URINARY SYSTEM IN THE MALE, With Sterility and Impotence. By Dr. R. Ultzmann, Professor of Genito-Urinary Diseases in the University of Vienna. Translated by Gardner W. Allen, M. D., Surgeon in the Genito-Urinary Department, Boston Dispensary. 12mo, pp. 160. Cloth. Philadelphia: F. A. Davis; Cincinnati: Alfred Warren. Price, \$1.00.

This is an interesting little work, and will be of great value to many practitioners in the treatment of many affections of men which seem obscure. It is divided into two parts. Part I. treats of the Neuroses of the Genito-Urinary System in the Male; Part II. treats of Sterility and Impotency in the same.

Among the neuroses of men are difficulty of urinating, dribbling of the urine, paralysis of various portions of the urinary apparatus, crystospasmus, accompanied with vesical tenesmus, unnatural erections, spermatorrhea, etc.

The author states that in some cases of ichorous hemorrhagic cystitis or cystopyelitis, with or without suppurative

nephritis, he has observed a growth of bacteria rapidly progressing. Not only are single, small, two and four limbed bacteria seen in vigorous motion, but whole clumps and shreds are brought to view by the microscope, which consist of motionless bacteria massed together.

The Part on Impotence and Sterility treats of all forms and causes of those conditions and the method of treatment. Sterility, a few years ago, was thought to be limited to the female sex. It was held that men who were able to perform the act of coitus to the satisfaction of both parties, must also possess procreative power. But the microscope has demonstrated the fallacy of such a view, for it has been shown that the semen of some men contains no spermatozoa.

As we have stated, the work will be found interesting and useful.

THE PHYSICIAN'S LEISURE LIBRARY—A TREATISE ON FRACTURES. By Prof. Armand Després, Surgeon of Charity Hospital; Member of Society of Surgery; of the Anatomical Society, etc. Translated by E. P. Hurd, M.D., Member of Massachusetts Medical Society, etc. 16mo, pp. 109. Paper. Detroit: Geo. S. Davis. Price 25 cts.

This little volume is taken from the third edition of the *Chirurgie Journaliere* of Prof. Armand Després.

It is not designed to be a complete treatise on fractures, but to embody the author's ripe experience in the treatment of the more common fractures, and to be a guide to the ordinary practitioner. Professor Després does not give many methods—he presents only those which have given him the best results.

SAUNDERS' QUESTION-COMPENDS, No. II. ESSENTIALS OF DISEASES OF THE SKIN, INCLUDING THE SYPHILODERMATA. Arranged in the Form of Questions and Answers. Prepared especially for Students of Medicine. By Henry W. Stelwagon, M.D., Ph. D., Attending Physician to the Philadelphia Dispensary for Skin Diseases; Physician to the Department for Skin Diseases, Howard Hospital, etc. With 74 Illustrations. 12mo, pp. 270. Cloth. Philadelphia: W. B. Saunders; Cincinnati: R. Clarke & Co. Price, \$1.00.

All that we have said in regard to the value of the Essentials of Gynecology, of the Question-Compends, to

medical students, who are attending college, will apply to this little work. It should be in the hands of every medical student and daily studied by him. Students, while attending lectures, have no time to give attention to extensive treatises.

The space allotted to each disease by the author has been based upon relative importance. As to treatment, the best and approved methods only, those which are founded upon the aggregate experience of dermatologists, are referred to.

SAUNDERS' QUESTION-COMPENDS, No. 10. Essentials of Gynecology. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By Edward B. Cragin, M.D., Attending Gynecologist to the Roosevelt Hospital, Out-Patient Department, etc. With 58 Illustrations. 12mo, pp. 192. Cloth. Philadelphia: W. B. Saunders; Cincinnati: R. Clarke & Co. Price, \$1.00.

This is a most valuable little work, and should be in the hands of every student in attendance upon medical lectures. If it had come into our possession when a medical student, it would have given more pleasure than if we had found a second Kohinoor diamond equal in value to the one which sparkles in the crown of the Empress of India.

Though not a complete treatise on Gynecology, yet to a student it will be found of more value than such a work, for it contains just what the student needs while in attendance upon lectures. Practitioners of medicine also will find it of great value for the purposes of review and of refreshing their memories.

PRACTICAL ELECTRICITY IN MEDICINE AND SURGERY. By G. A. Liebig, Jr., Ph.D., Assistant in Electricity, Johns Hopkins University; Lecturer on Medical Electricity, College of Physicians and Surgeons, Baltimore, etc., and George H. Rohé, M.D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore; Visiting Physician to Bay View and City Hospitals, etc. Profusely Illustrated, 8vo, pp. 383. Cloth. Philadelphia: F. A. Davis. Cincinnati: Alfred Warren. Price, \$2.00.

It has been the endeavor of the authors to set forth in this work, in a concise way, the fundamental principles which are involved in the application of electricity to medi-

cal and surgical practice. They have kept in mind that a treatise on electricity, to be of value to a physician, should be eminently practical, dealing only with such matters as have a direct bearing upon the requirements of the practitioner. At the same time they have understood that the work should be free from unnecessary technicalities, and only so much attention should be devoted to theory as is demanded in the explanation of such phenomena as are presented in the medical and surgical uses of electricity.

The work is divided into three parts. In Part I. are discussed the various forms of electrical and magnetic apparatus likely to be of use to the physician in his daily experience with electricity, as well as the most suitable arrangement of cells for any given work, the construction and use of galvanometers, the theory of the chemical actions taking place in the storage cell or accumulator, and the best methods of caring for such batteries.

Part II. first describes the effects of electric currents upon the various tissues and organs of the body in health and disease, and then demonstrates how the modifications by disease may be utilized for purposes of diagnosis.

Part III., which will be found especially interesting to practitioners, is devoted to discussing electricity as a therapeutic agent. The descriptions of the application of this agent in the treatment of the many diseases in which it can be used with advantage are very clear and easily understood.

It is impossible to do justice to such a work in a brief notice of it. We can assure our readers, however, that they will find it fully abreast of the times in all that pertains to electricity as a remedial agent.

COCA AND ITS THERAPEUTIC APPLICATION. By Angelo Mariani. With Illustrations. New York: J. N. Jaros.

This is an interesting little work of 78 pages, bound in cloth, with gilt edges.

The author, Mr. Mariani, of New York, is a modest man. He has made it the aim of this modest work to offer to the medical profession a short account of the history of Coca, and of the investigations which it has called forth up to the present day. He has divided his subject into five parts.

1st. He describes the botanical character of Coca, and also speaks of its culture and the mode of gathering it.

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- 2d. Its history, its properties, and uses.
 - 3d. The physiological researches made in the domain of Coca, devoting a special chapter to Cocaine.

4th. Its therapeutic application.

Mr. Mariani makes a number of preparations from the leaves of the Coca plant. Among them Elixir Mariani, Pate Mariani (Lozenges of Coca), Pastilles Mariani (Coca and Cocaine). The Mariani or Concentrated Extract of Coca (Tea Mariani), Vin Mariani, etc.

Editorial.

MARIANI'S PREPARATIONS OF COCA.—All physicians have heard of, and very many have used, Mariani's Wine of Coca, known usually by the name of *Vin Mariani*. But besides the wine, Mr. Mariani makes several other preparations of the leaves of Coca. Among them is *Tea Mariani*, which is a concentrated extract of Coca. The Tea may be prescribed in doses from three to six teaspoonfuls in the course of the day, clear, or mixed with brandy, wine, water, or milk, hot or cold.

Mr. Mariani states that Drs. Fordyce Barker, J. H. Douglas, Henry B. Sands, and George B. Schrady have authorized him to make known that it was due to *Tea Mariani* added to milk, in the proportion of a teaspoonful of the *Tea* to a cup of milk, that they were able to nourish General Grant, the ex-President, when he was unable to support any other food. By this means they succeeded in prolonging the life of their illustrious patient for several months.

ANDERSONVILLE PRISON.—Every one has heard of the terrible sufferings of the poor captive Federal soldiers who were confined in the military prison at Andersonville in the late war between the North and the South. Thousands of poor fellows who had been captured while serving their country, after dragging out a miserable existence for weeks or months from starvation and disease, died there far away from home, and were buried in trenches like brutes. It is still a question, often discussed, as regards where the responsibility rests for the sufferings and terrible mortality experienced by the poor creatures imprisoned at Andersonville. In the North it is generally believed that it was a crime which should be charged to those who were in author-

ity in the Confederate Government; while in the South it is held, we believe, that the deplorable conditions were the results of circumstances which were unavoidable, so far as the Confederate Government was concerned—that so far as any crime was involved for the terrible sufferings and mortality which transpired, it attached to the Federal Government.

In *Belford's Magazine* for January, 1890, is an article on "Andersonville Prison," by the late Hon. Jefferson Davis, who was President of the Confederacy. At the outset of the article, he states that the most prominent means which civilization has devised to mitigate the rigors of war are cartels for the exchange and parole of prisoners; and that early in the war the Confederacy sought and obtained the adoption of such cartel.

By whom, how and why the cartel was violated, he says he proposes to show in the course of the article from which we copy. He states that the article was inspired by a number of eminent citizens of the North, who, desiring to know the whole truth, have urged him to prepare a history of Andersonville Prison to appear in some periodical published in the North.

The United States, he asserts, refused to fulfill their obligations to continue the exchange and parole of prisoners. The authorities at Washington he charges with a violation of the cartel. The South had not the resources for men to keep its armies filled, that the North had. When death, sickness, or capture, removed a Southern soldier from the ranks, it was an irreparable loss. The great want of food, clothing, and medicines on the part of the Confederate Government, with which to supply the pressing needs of their own soldiers, made the maintenance of prisoners captured from the Federal armies a very great burden. By exchanges, therefore, the South was able to put into its armies the men that had been captured from it, and refill their depleted ranks, and at the same time rid themselves of the support of the captives held by them, who were a great burden.

"But the United States authorities," says Mr. Davis, "having refused to continue the exchange and parole of prisoners, the number of Northern captives rapidly accumulated beyond the capacity of the prisons at Richmond, and also beyond the ability of the commissariat to supply them. In the absence of any prospects of relief from these

embarrassments, the removal of the prisoners became necessary.

"A large part of the food of our army in Virginia was drawn from the more southern and southwestern States, and the means of transportation were limited and diminishing. The place to which the prisoners should be removed had to be chosen and prepared. Andersonville, Ga., was selected, after careful investigation, for the following reasons: It was in a high pine-woods region, in a productive farming country, had never been devastated by the enemy, was well watered, and near to Americus, a central point for collecting the tax in kind, and purchasing provisions for our armies. The climate was mild, and according to the best information, there was in the water and soil of the locality 'no recognizable source of disease.'

"Persistence by the United States in refusal to observe the cartel, caused so large an increase in the number of the captured sent to Andersonville as to exceed the accommodation provided, and thus to augment the discomfort and disease consequent on their confinement. A selfish policy, which for an indefinite time would leave in captivity their countrymen, who, at the call of their government, had volunteered to fight its battles, marked a degree of cold-blooded insensibility which we had not anticipated.

"Without entering into details, the difficulties encountered, in the case of the large and, in the latter part of the war, ever increasing number of prisoners, may be briefly enumerated thus:

"1. The exceptionally inhuman act of the North, declaring medicines to be contraband, to which there is but one, if indeed there be one, other example in modern war.

"2. The insufficient means of transportation and the more inadequate means of repairing railroads and machinery, so that, as the war continued, the insufficiency became more embarrassing.

"3. The numerical inferiority of our army made it necessary that all available force should be at the front; therefore the guards for prisons were mainly composed of old men and boys, and but a scanty allowance of these.

"4. The medical officers were not more than were required with the troops, and contract physicians disliked the prison service, among other reasons, naturally, because of the impossibility of getting the proper medicines. Our Surgeon-General did much to supply this want by substi-

tutes extracted from the plants and trees of the South ; but these, though possibly as good, would, like other substitutes, be less confidence-inspiring.

"5. The food was different from that to which most of the prisoners had been accustomed, particularly in the use of corn meal instead of wheat flour. Of the latter it was not possible, in 1864, to get an adequate supply at Andersonville.

"It was not starvation, as has been alleged, but acclimation, unsuitable diet and despondency which were the potent agents of disease and death. These it was not in our power to remove. The remedy was with those who, unlike King David, commenced their lamentations after the end had come. The remedy demanded, alike by humanity and good faith, was the honest execution of the cartel."

Mr. Davis states that on May 21, 1861, it was enacted by the Congress of the Confederate States, "That all prisoners of war taken, whether on land or sea, during the pending hostilities with the United States, should be transferred by the captors, from time to time, as often as convenient, to the Department of War; and it should be the duty of the Secretary of War, with the approval of the President, to issue such instructions to the Quartermaster-General and his subordinates as shall provide for the safe custody and sustenance of prisoners of war; and the rations furnished prisoners of war shall be the same in quantity and quality as those furnished enlisted men in the army of the Confederacy.

"According to General Orders, No. 159, Adjutant and Inspector General's Office, 'Hospitals for prisoners of war are placed on the same footing as other Confederate States hospitals, in all respects, and will be managed accordingly.'

Dr. Joseph Jones, whom Mr. Davis styles an eminent scientist and physician of New Orleans, was ordered in August, 1864, to inspect and report on Andersonville Prison. We quote the following from his report, which Mr. Davis has incorporated in his article: "The Federal prisoners were removed to Southwestern Georgia in the early part of 1864, not only to secure a place of confinement more remote from Richmond and other large towns, from the operations of the United States forces, but also to secure a more abundant and easy supply of food.

"As far as my experience extends, no person who had

been reared on wheat bread, and was held in captivity for any length of time, could retain his health and escape either scurvy or diarrhea, if confined to the Confederate ration (issued to the soldier in the field and hospital) of unbolted corn meal and bacon. The large armies of the Confederacy suffered more than once from scurvy, and, as the war progressed, secondary hemorrhage and hospital gangrene became fearfully prevalent from the deteriorated condition of the systems of the troops, dependent on the prolonged use of salt meat. And but for the extra supplies received from home and from the various state benevolent institutions, scurvy and diarrhea and dysentery would have been still further prevalent. A similar statement has been made by Dr. Austin Flint, Jr., in his recent work on the 'Physiology of Man.'

"It was clearly demonstrated in my report that diarrhea, dysentery, scurvy and hospital gangrene were the diseases which caused the mortality at Andersonville. And it was still further shown that this mortality was referable in no appreciable degree to either the character of the soil, or waters, or the conditions of climate.

"The effects of salt meats and farinaceous food, without vegetables, were manifest in the great prevalence of scurvy. The scorbutic condition, thus induced, modified the course of every disease, poisoned every wound, however slight, and lay at the foundation of those obstinate and exhaustive diarrheas and dysenteries which swept off thousands of these unfortunate men."

In Mr. Davis' article the following is quoted from General Imboden: "At the time of my inspection there was a good deal of sickness among the prisoners, but not a large percentage of mortality. Our medical officers, even with their scanty pharmacopeia, gave equal attention to sick friends and enemies, to guard and to prisoners alike. . . . Bad as was the physical condition of the prisoners, their mental depression was worse, and perhaps more fatal. Thousands of them collected around me in the prison, and begged me to tell them whether there was any hope of release by an exchange of prisoners. Some time before that, President Davis had permitted three of the Andersonville prisoners to go to Washington to try and change the determination of their Government and procure a resumption of exchanges. The prisoners knew of the failure of this mission when I was at Andersonville, and the effect was to

plunge the great majority of them into the deepest melancholy, home-sickness, and despondency.

"They believed their confinement would continue until the end of the war, and many of them looked upon that as a period so indefinite and remote, that they believed that they would die of their sufferings before the day of release came."

General Imboden proceeds to say, as quoted from him in Mr. Davis' article: "The Federal Government remaining deaf to all appeals for exchange of prisoners, it was manifest that the incarceration of their captured soldiers could no longer be of any possible advantage to us, since to relieve their sufferings that Government would take no step, if it involved a similar release of our men in their hands. Indeed, it was manifest that they looked upon it as an advantage to them and an injury to us to have their prisoners in our hands to eat our little remaining substance."

General Imboden says that Generals Cobb, Pillow and himself determined that it was the best thing to do to get instructions from Richmond to make arrangements to send off all prisoners that the Confederacy had at Andersonville and Eufala to the nearest accessible Federal post, and having paroled them not to bear arms until regularly exchanged, to deliver them unconditionally, simply taking a receipt on descriptive rolls of the men thus turned over. St. Augustine, Florida, being the nearest Federal post that could be conveniently reached by rail, communication was opened with the Federal commander there. He agreed to receive the prisoners on the terms mentioned. Over six thousand prisoners were sent. But to General Imboden's utter amazement, when the prisoners reached St. Augustine, the Federal officer refused to receive and receipt for them, giving as a reason that he must first consult with General Grant, who was then in front of Petersburg, Va., with whom he could only communicate by sea along the coast. The prisoners, however, were turned over to the officer unconditionally, without receiving any acknowledgment from him that they had been passed over to him.

Notwithstanding we have taken up a great deal of space in copying from Mr. Davis' article, yet our quotations are comparatively brief. We feel sure that the majority of our readers will be interested in this defense made by the ex-President against the charges that the Confederate Gov-

ernment were guilty of the grossest cruelty in the treatment of Federal prisoners captured by them. In a war in which the opposing parties are inflamed by very bitter feeling toward each other, as is usually the case in a civil war, it would be natural to expect that there would oftentimes be less observance of humane obligations toward the captured than there should be. Yet we can not believe that men, however blinded they may become by passion, will trample under foot all Christian principles.

Several months ago we copied the description of the sufferings of the prisoners in Andersonville prison, which appears in the Medical History of the War of the Rebellion. Who is there who would not rather believe that the sufferings of the poor, captured soldiers imprisoned at Andersonville were the result of circumstances that could not be avoided? Certainly it is not pleasant to believe that a large fraction of professedly Christian people are as savage in their feelings as are the savages themselves.

CLASSICAL PUBLICATIONS.—Every physician of this country knows that the house of Henry C. Lea's Son & Co., of Philadelphia, are most extensive publishers of medical works. Very few if any publishing houses in the world issue more volumes devoted to the various departments of medicine than they do; but probably only a few physicians are aware that they also publish classical works, but such is the fact.

We have a catalogue of works published by this great publishing house, and we find among their publications the following Latin text-books: Cæsar's Commentaries on the Gallic War, The Works of Virgil, Q. Curtius Rufus' History of Alexander the Great, Sallust's Catiline and Jugurtha, Cicero's Select Orations, Livy's History of Rome, Selections from Ovid, Works of Horace, A Dictionary of the Latin Language by Dr. Kaltschmidt, Schmidtz and Zumpt's Latin Grammar, A Latin Reading and Exercise Book, etc.

A NEW MEDICAL DICTIONARY.—The Messrs. Blackiston, Son & Co., of Philadelphia, inform us that they will publish this month a new Medical Dictionary by Geo. M. Gould, M.D. It will be in one volume, and will contain several thousand new words and definitions—the whole number of words being greater than is found in any other

medical dictionary. There will also be found in it elaborate and useful tables of bacilli, leucomaines, ptomaines, micrococci, etc.; of the arteries, nerves, etc.; and of the mineral springs of the United States, together with much information of a scientific character collateral to medicine.

DENTAL SURGERY "TO THE FORE."—This is the heading of an editorial article in the issue of the *London Lancet* of March 1st. The article shows that even in England, at this time of great progress and general diffusion of knowledge, instances of remarkable ignorance are developed now and then. If the circumstance had occurred in a hospital in this country, we presume that the *Lancet* would not have been at all astonished.

We quote the editorial in the *Lancet* headed as above:

"A paragraph in a local paper informs its readers that at the annual meeting of the — Hospital a special vote of thanks was enthusiastically accorded to its dental surgeon for the 'marvelous skill displayed in his treatment of a case of fracture of both jaws'; and the board congratulated themselves that 'dental surgery was to the fore at —.' It was stated that heretofore the sole treatment in such cases was a simple four-tailed bandage, but their dental surgeon had taken casts of the mouth and constructed splints to fit the teeth. It seems astounding that acquaintance with this method, described as it is in all the principal textbooks on surgery and dental surgery, which every general student at a London hospital has had opportunities of seeing, and which we may safely say has formed part of the special education of the dentist since the foundation of the Dental Hospital in 1848, should have only now penetrated to a town not one hundred miles away."

"CHEMICAL VACCINATION" AGAINST YELLOW FEVER.—The *London Lancet* states in a recent issue that Drs. Costaneda and Borda, of Bogota, with the sanction of the Minister of Public Instruction in Colombia, have been engaged in some experiments upon animals, with the object of discovering whether it is possible, by the injection under the skin of urine from yellow fever patients, and presumably containing some chemical substance due to the action of a specific microbe, to afford protection against the infection of yellow fever. They were led to this research from some experiments upon the "pyocyanic disease" by MM. Char-

rin and Ruffer, which were communicated to the Paris Biological Society in the early part of 1889, and which showed that the bacillus pyocyanus, when introduced into the system of rabbits, causes the formation of substances which possess the property of producing the same physiological effects as the bacillus itself, and that these bodies can be detected in the urine; and also in view of a paper by Dr. Carmona, of Mexico, upon yellow fever. Observations were made with yellow fever urine, both sterilized and non-sterilized, and an approximate idea was thus formed of the dose which ought to be safe for a human being.

LILLY'S IMPROVED GLYCERIN SUPPOSITORIES.—(Containing ninety-five per cent. Glycerin). These invaluable peristaltic persuaders are prepared in a most excellent and improved manner by Messrs. Eli Lilly & Co., of Indianapolis. Their suppositories contain ninety-five per cent. of glycerin, and the beauty of their construction is the peculiar water-proof covering of each suppository, which is readily and easily removed. By simply pressing upon or slightly squeezing the suppository between the fingers it slips out with astonishing ease, leaving the covering between the fingers—a great improvement, as any one will readily recognize who has ever made the effort to divest one of the ordinary suppositories from its lead foil and tissue paper envelope.—*Southern Practitioner*, October, 1889.

NEBRASKA BOARD OF PHARMACY.—The following are the examination questions on Theoretical Pharmacy asked candidates for license to practice Pharmacy in the State of Nebraska, February, 1890. Besides the examination on Pharmacy, there were examinations on Materia Medica, Toxicology, etc.; but we have not space for the questions on those branches:

1. What is heat, and how would you measure it?
2. What is the lightest known element?
3. Name the solvents that are used in Pharmacy.
4. What is specific gravity?
5. State the theory of filtration.
6. State the method employed in preparing official waters of the Pharmacopœia.
7. Ether—Enumerate the official compounds and state proportions of ether in each.
8. What is a solution?
9. In what respects do confections differ from conserves and electuaries?
10. What are confections? Name two official confections and give formula for same.

PRACTICAL PHARMACY.

1. What is a Pharmacopœia?
2. Define sublimation.
3. Explain the difference between maceration and percolation.
4. Name four tinctures made by maceration, and explain why they could not be made as well by percolation.
5. What is the mercury strength of blue ointment, blue mass?
6. What per cent. of morphine should a good specimen of opium contain?
7. Name any two officinal preparations you have made, and state how you prepared them, naming all the articles used in each.
8. What is an infusion?
9. Describe the difference between a cerate and an ointment.
10. Take of

Fl. ext. digitalis..... 6 drs.
Elixir simple..... 1 oz.

Mix. Teaspoonful every two hours. Is this safe or unsafe to be dispensed? Give your reasons.

ORDERS RECEIVED BY A DRUGGIST.—A druggist who does business several miles from Cincinnati says that he has received lately several queer orders and some very ridiculous prescriptions signed by men who claim to have the right to place M.D. after their names. Here is one of the orders:

"mr. brown please send me $\frac{1}{2}$ point of your Best whiskey, and a bottle of caster ile my wife had a baby Last Night also a pair of twezers and A bottle of Black Ink."

Another order was after this style:

"Please send me a bottle of Whites Coff Drops my little girl has a very bad coff by mister taylor send a $\frac{1}{2}$ ounce of arbuckles asid."

The druggist supposed carbolic acid was wanted, and sent it.

Another customer sent an order for—

"1 box ov sensitive pills."

The druggist, considering that compound cathartic pills were about as "sensitive" as any other pills are, filled the order with them.

Mr. Brown states that as la grippe has subsided to a great extent in his town, the sale of quinine has diminished accordingly.

IS IT A FACT?—*Meyer Brothers' Druggist*, a monthly pharmaceutical journal published in St. Louis, makes the following statement in an editorial in a recent issue: "A few medical journals are endeavoring, in a laudable manner, to interest their readers in the revision of the pharmacopœia. Unquestionably, many of the medical editors are no more conversant with the pharmacopœia than they are with the

materia medica of the Patagonians, but perhaps, they are not too old to learn."

This is certainly a strange charge against physicians; for if medical editors are as ignorant as is asserted, so are ninety-nine doctors in a hundred. Is it not the physicians who prescribe the preparations of the pharmacopœia? Druggists do not prescribe them. Can it be possible, then, that physicians are daily prescribing remedies of which they know nothing more about than they do about the medicines which the Patagonians use?

While speaking of the pharmacopœia, we will mention that the *Druggist* has a column or so devoted to criticisms of the present U. S. P., and suggestions as to changes to be made in the coming revision, from druggists of all parts of the country. We notice that every one advises retaining the present system of weights and measures. Says R. A. Brittain, of St. Joseph, Mo., "I would be very sorry to see any change in the weights and measures." F. W. Harman, of Mound City, writes, "I prefer the old system of weights and measures. While I believe the metric system of weights and measures to be a very good system, I think it would be an age before we could do away with the old system. It is impossible to get a great many of the physicians to use the metric system, and, as long as we have it, we will have two systems to deal with, which I consider a great inconvenience."

Another drug firm remark as follows: "Our physicians are all using the old U. S. apothecary weight—because, they aver, they are less liable to make mistakes by using it than by the decimal system."

We, too, do not think it is advisable to change to the decimal system. The present or old system is very simple, and we see no need to throw it aside, to which we are all accustomed, and adopt a new system which "will come awkward to us" for a very long time.

DIAGNOSIS OF THE PUERPERAL CONDITION.—Winckel says that the symptoms which lead to the diagnosis of this condition may be divided into uncertain, probable, and positive signs. To class II., or probable signs, belong the swollen, secreting breasts, with large veins, the nature of the secretion, colostrum; the gaping vulva, with fissures of the perineum or within the vulva; the wide, smooth vagina, the remains of the obliterated hymen and the fissures in the

vault of the vagina; the lengthened, fissured cervix, the gaping external and internal rings; the enlarged uterus, upon the internal surface of which the placental site may be felt for the first seven or eight days, and the lacteal discharge. All these, says Winckel, are only probable signs; none of them are sure when isolated, because they may be very pronounced in other conditions, as, for instance, the secretion of the breasts may be present in tumors of the uterus and ovaries, and may also obtain without them, even at an advanced age; the changes at the vulva may occur in lupus carcinoma, or may due to the passage of foreign bodies, etc. All of these signs, or at least the majority of them, when taken together, justify a positive diagnosis. The fact that they soon disappear, or rapidly change with time, is in favor of the diagnosis, as atrophy of the uterus, lessening of the quantity of its secretion, cessation of the secretion of milk. These may all be used as essential supports to the diagnosis.

Sure proof of the occurrence of birth is only furnished by the discovery of parts of the ovum. He says he remembers the case of a servant who sued her mistress because the latter had accused her of having had intercourse with her husband. He succeeded in extracting a small piece of tissue, about the size of a pea, from the external os, and easily demonstrated by the microscope the presence of very pretty chorionic billi, thus proving at once the occurrence of cohabitation, conception, abortion, and destruction of the child. If one succeeds in removing remains of the placenta from the inner surface of the uterus, the diagnosis is established beyond the question of a doubt. In most cases the demonstration of shreds of the decidua with large, nucleated and fatty cells, is of itself a sure proof. As regards the time that has elapsed since labor, the breasts, the size of the uterus, the nature of its secretion, and the *freshness* of the wounds present, will aid in determining the point in question. In like manner the quantity and extent of the last-named conditions will determine the question as to whether the child was mature or born prematurely. On the other hand, it is not possible to establish the fact that twins have been born in a woman who has been recently delivered. This question was put to Dr. Winckel, he says, by a judge, and he testified that unless the placenta is still present, the possibility of such an occurrence must be admitted.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 268. }
Old Series.

APRIL, 1890.

{ VOL. XIX. No. 4.
New Series.

Original Contributions.

Comparative Tuberculosis, from a Sanitary Standpoint.

BY PAUL PAQUIN, M. D., COLUMBIA, MO.

Read before Medical Association of the State of Missouri.

A NATION that persistently ignores the natural laws governing health; that is indifferent regarding the conditions which underlie human welfare and happiness, is *not great* in the fullest sense of the word. Such a nation, whether under monarchical rule, or under republican laws; whether she boasts of freedom, or blushes in abridged rights; none of her people can say truly: "Our government is for 'the greatest good of the greatest number.'" And what is it that underlies the welfare of mankind? Is it that wealth that sprinkles the land with palaces and attempts to beautify nature? Is it the knowledge and power that controls the masses and subjugates inferiors? Is it that condition of existence that affords priceless equipages and luxurious living? Is it possession of anything—of all things material, that man insanely pursues in his mad chase on earth? No. None of these, separately or collectively, can procure the happiness which human nature craves, and will always seek, to the end of time. Health must first exist. Strength of body physical endurance must be, if worldly happiness is to be. Even in the midst of opulence, more or less discomfort and misery is the lot of mortals. Health, then, is a legitimate question for the governments of all nations. Nay, it is the foundation upon which contentment rests; upon which the sinews of nations and the armies of the world must depend. And yet, how many famous statesmen have ignored this point. How many famous legislators, even in this country that we call free, have, with a deliberate hand, throttled legislation looking to the protection of health. In this age

of progress in all the walks of life; in this century which has seen medical science make such gigantic strides and establish positive prophylaxis concerning many decimating plagues, we have yet to combat statesmen whose master minds seem able enough to grasp all financial questions, but who, nevertheless, insult the mass of human creatures by scoffing uncharitably at their pleas for governmental protection against maladies and death. Even the government of governments, the republics of republics, the great representation of "the people, for the people," presents frequent and recent examples of statements bordering on mockery relating to legislation against disease. It is the duty of all governments, then, to take seriously the question of health into account. And for us, for the Americans, who boast of being sovereigns, it is the duty of each and all to help foster and advance all the institutions which can truly, and by legitimate means, promote health. The physician, however, is the acknowledged master in this most noble of pursuits. To him the world must look for leadership. It is he who, with the spirit of sacrifice and charity not surpassed in the physician of souls, must carry the banner of deliverance in advance of the ranks. And this is one of the grand objects, I take it, of a scientific body of the character of the Missouri State Medical Association.

You will pardon me for these preliminaries to my subject. These thoughts pervaded my mind when, as a member of the Committee on State Medicine, I undertook, under the advice of my honorable colleague and Chairman, Dr. Allen, the task of writing an article on Comparative Tuberculosis, from a sanitary standpoint.

HISTORY.

The French physician, Villemin, about the year 1867, was the first to announce positively the contagiousness of tuberculosis. The Veterinarian, Toussaint, afterward published the results of his cultivation of the virus of this disease, and announced successful inoculations made with such cultures. And finally to Robt. Koch, of Germany, belongs the honor of having discovered the actual virulent microbe of tuberculosis, and of isolating it in a state of purity. Since then experiments have multiplied in every country; and to-day it is a point beyond controversy that tuberculosis is contagious, and is due to a specific micro-organism—the bacillus of Koch.

ORIGIN.

The question of the origin in a given case of tuberculosis, or, in the various outbreaks among the people, is from a sanitary standpoint the most important one to consider. Bacteriology has shown to us many heretofore doubted or unknown sources of this disease. I will attempt to enumerate those of greatest moment, and will perhaps be better understood in classifying them under two headings, and consider them separately.

First. From human beings to human beings:

By inhalation; By ingestion; By inoculation;
By inheritance, and from them to animals.

In the homes, in the schools, in the hospitals, in the railway and street coaches and cars, on boats, on the streets, everywhere consumptives are found. The sputa coming from their lungs may be loaded with bacilli. It falls here and there, dries, and becomes a powder of fine character; or it mixes with fluids. And the invisible vegetable germs are then either in the state of dessication, which insures their vitality for an indefinite period, or in a state of moisture that does not rapidly affect their virulence in all cases. Thus the carpets, cuspidores, floors of various edifices, the walks, the earth, etc., etc., become the recipients of deadly microbes, which the broom, the shaking of carpets, and various other things raise from their lurking places. They circulate in and out, far and wide. They alight everywhere, in the water, the milk, the meat and bread, etc., and both man and beast are liable to become affected by inhalation, ingestion, and even by inoculation. On the other hand, ejections from patients with intestinal tuberculosis add numbers to the destructive parasites. Fortunately the natural resistance of leucocytes and the healthy tissues and the more or less destructive action of atmospheric elements are powers against them. Thus, with the exception of inheritance, all the means of transmission of tuberculosis, directly or indirectly, from man to man, and from man to animals, may be accounted for. It is known to every physician that tuberculosis frequently runs through entire families, with few or no exceptions. The contagion in families is, on account of close contact and communication, made more readily effective. In many such instances hereditary transmission should also be taken into account. Without facts at hand, one can easily conceive the possi-

bility of congenital tuberculosis, but unfortunately there are evidences of such occurrences. In animals I have found on several occasions the lesions of tuberculosis in the uterus and the placenta, and I have observed also tuberculous mesenteric glands in the young, in cases of abortion of consumptive milch cows.

Besides, there are the so-called inherited predispositions or conditions of the young born from tuberculous parents, to which undoubted authorities have attributed much consumption. All these points in respect to the prophylaxis of tuberculosis have a decided bearing, and but few of them are sufficiently taken into account by either the medical profession, or the people at large. For instance, the separation of the affected member of a family is seldom practiced. The relations of marriage remain unaltered. The marriage of tuberculous persons is considered lightly, although an individual known to be suffering from almost any other contagious disease, far less dangerous, could scarcely find a companion for life. Indeed, the grave question of heredo-tuberculosis is considered with almost culpable indifference. The fact that children not only may be born bacillisible, but may be conceptionally infected, is in itself of incalculable public moment. This is well appreciated by veterinary scientists and among advanced stock-raisers. They take great pains to avoid tainted progenitors. It is well established, in countries leading in scientific stock-raising, that tuberculosis is diminishing in stock, while it still progresses in man, in whom congenital infection is not considered.

Domestic animals, especially cattle and fowls and pet animals, are subject to fall victims of tuberculosis directly from mankind, by eating sputa, etc. And then they in turn may give the disease to man. This brings us to the second heading :

Second. From animals to animals.

By inhalation ; By ingestion ; By inoculation ;
By inheritance, and from them to human beings.

On the same principle that tuberculosis is transmissible directly or indirectly among the human race, so it is transmissible among lower animals of various species, and between different species that are susceptible. The virulent matter thrown here and there from the nostrils of tuberculous cattle, for instance ; the feces from cases of intestinal tuberculosis ; the tuberculous meats eaten by fowls and carnivores.

rous subjects all contribute to the spread of the disease. Consequently, the bovine species, swine, fowls, rabbits, which furnish a great proportion of our food, and all of which are greatly susceptible, become so many more sources of the origin of the terrible plague among people.

We will consider the many possibilities of such transmission. This is, in fact, the chief object of this article.

Is tuberculosis in man and animals identical? Of late years the answer has been given many times to this oft propounded question, by various competent authorities in both Europe and America; and that answer is, that tuberculosis in man, in cattle, swine, fowls, rabbits, etc., is one disease, and is due to the same microbe, the bacillus of Koch. It is true that no less an authority than Kohn has disputed it. It is true also, that other diseases may be induced in rabbits that greatly resemble tuberculosis. But it is not less a fact that all those animal bodies, including man, are, to a variable degree, fit soils for the growth of the true germ of true tuberculosis. From the experiments made by myself, and since by my colleague, Jno. W. Connoway (an accurate worker in the field of pathology, and for a year my assistant at the experimental laboratory of Columbia), I can state positively that the tuberculosis of man is, by inoculation and otherwise, transmissible to animals of the class that supply our meat and milk; and that the bacillus of Koch is the cause, greatly favored, however, by several weakened and pathological conditions of the susceptible organs and tissues. It behooves us, then, to inquire into the conditions of food from animals subject to tuberculosis. I will attempt a classification of such foods, in the order of their danger, beginning with the most dangerous. This classification can not be made dogmatical as yet, but it is based on the findings of the most reliable pathologists and bacteriologists: *First.* Blood, raw, from cases of generalized tuberculosis. *Second.* Milk, raw, from subjects with tuberculosis in mammary glands. *Third.* Milk, raw, from animals having lesions in most of the viscera. *Fourth.* Liver and kidneys, cooked, from same class of subjects. *Fifth.* Muscular and fat meats, not well done (cooked), from similar subjects. *Sixth.* Butter, buttermilk and cheese derived from milch cows with tuberculosis. /

All these sources of infection may, of course, vary greatly in the degree of danger, and as we readily understand, produce the malady by one mode almost exclusively; that is,

ingestion. Thus we find ourselves not only surrounded by the danger of tuberculosis among our own species, but also by tuberculous virus coming from lower animals.

Many medical men adhere still to the belief that tuberculosis is nothing more than pulmonary consumption so-called, and that the lungs are always the first organs involved. Some insist, indeed, that these organs are the only ones that become affected. This fatal notion has nothing for a basis, except the erroneous and popular belief that the pathological condition conveniently termed cold, or some equivalent term, is about the sole cause of phthisis, and that coughing is the constant symptom present. It suffices, however, to feed cattle, swine, cats and fowls on tuberculous meats, or foods containing sputa from tuberculous people, awhile, to determine the fallacy of this idea. In such instances the disease generally develops into, or in the neighborhood of the alimentary organs first, and, as a rule, reaches the other organs, such as the kidneys, lungs, etc., later, by means of the lymphatics and blood circulation,

The Congress of Tuberculosis, in Paris, July, 1888, has brought forward many observations tending to prove this assertion to be as true in man as in beasts. Vallin and Conheim have observed tuberculosis in a great number of children raised with dairy milk on the bottle, in which the intestines and mesentery were especially affected, and in which, frequently, the lungs are found to be free.

From innumerable, accurate, and reliable observations and experiments throughout the world, then, we find ourselves everywhere confronted with the awful, the overwhelming evidence, that mankind may, and must, in the actual condition of things, contract tuberculosis from animals, to a great extent. This preventible origin not only increases it in adults, but to a degree immeasurable, causes a constant gradual augmentation of congenital cases, that will reach from generation to generation, unless science and law comes to the rescue more effectively in the near future.

The milk of tuberculous cows, especially those having lesions in the mammary glands (a common thing in grave cases, by the way), has been found by Degive, Bouly and Nocard, of France; Bollinger, in Germany; Bang, in Sweden; Harsten, in Belgium; Lydtin, in Switzerland; Flemming, in England, and a few American pathologists, to be capable of producing tuberculosis. I, myself, have found

extensive tuberculous lesions in the mammary glands of milch cows; and I have known of some cases of tuberculosis induced by bacillized milk.

It is a common practice in some dairy establishments of the cities and towns to mix all the milk from the various cows, and sell it from house to house. If one cow in one of these dairies has mammary tuberculosis, she may easily give, with her milk alone, millions of bacilli. If only one million, say, is mixed with the milk that is sold to feed one hundred persons, it makes a proportion of ten thousand to each person, of these invisible, deadly microbes. Now, calculate from this basis the appalling number of people that are exposed from a given number of dairies in which tuberculous cows exist. And this is only the milk—the very food consumed so extensively by the children and many of the adults.

Concerning Meats.—They are in most cases less dangerous than the milk, because the bacilli tuberculosis in the muscular tissues seem to be transitory. But still Nocard, Nosotti, Arloing and Chauveau have fully established the fact that muscular juice from a tuberculous beef frequently contains them in certain quantities. The experiments made by such men as these, with beef juice, have resulted in transmitting tuberculosis to animals. Mr. Conoway and I have, at the laboratory, experiments in the same line under way which promise the same results.

Beef, from a subject in which tuberculosis was found, either in the lungs, the liver, the spleen, intestines, mesentery, kidneys, pleura, or in a few of these organs, may be cut up in pieces and offered for sale at the butcher's stand, and not even an expert would, in a moment, declare the meat to be dangerous. Such meat might contain in its tissues, and in its vessels, especially the lymphatics and ganglia, the bacilli of Koch, and none could tell it at once. Ulceration of a tubercle on the surface of a blood-vessel, or a lymphatic, makes this occurrence readily appreciable.

At slaughter-houses it is a common practice to throw to the swine the viscera not utilized, including the too badly diseased portions of the subjects slaughtered. Thus hundreds of hogs are exposed to tuberculosis. These animals are, in their turn, slaughtered and sold for food, and their objectionable viscera is thrown to other animals of the same

species. Fowls also, in some places, have access to such refuse, and they are afterward sold to the public for food.

Need I go any further to demonstrate to this intelligent body the alarming condition of things which puts mankind at the mercy of ignorance, which frequently is in some measure guilty? I have a mass of testimony from experiments and observations from abroad and of my own, in the field and laboratory, that if perused carefully would convince even the most skeptical on the question at hand.

PROPHYLAXIS.

In America the inspection of foods is so crude, generally speaking, that reliable statistics as to the per cent. of cases of tuberculosis among food-producing animals are wanting. In Europe there are numerous reliable sources from which to obtain evidence. For instance, at the Amsterdam (Holland) Abattoir, Mr. Van der Sluijs, inspector, found 312 cases of tuberculosis in cattle and hogs, during a continuous period of eight months. In France and England the inspection shows a somewhat smaller per cent. Now, note that these statistics come from abattoirs, where stock inspection is constantly made by competent officers before the sale of meat. Every one understands that without the fear of inspection the number would be much greater. In Missouri tuberculosis is not so common in live stock. However, I have noticed it in a number of milch cows, and have seen it in poultry. Small towns of say 4,000 inhabitants, could show you, with the help of qualified men, from half a dozen to a dozen or more tuberculous cows. And what is true of Missouri is about true of the United States, and perhaps of America as a whole.

Whatever may be the exact conditions regarding the dissemination of this disease, and of all the discussions *pro* and *con* concerning it, four things are known positively enough, and they should be considered—indeed, they must be considered if we would act wisely. *First*, that tuberculosis in man and beasts is identical. *Second*, that being identical and transmissible from man to animals, it can not but be transmissible from animals to man. *Third*, that there does not exist, among milch cows, and among food-producing animals, of this country, the true form of the disease under study. *Fourth*, that we have, consequently, a widespread source of contamination among lower animals, and if we remain indifferent regarding these facts, we fail to

do our whole duty as physicians and as a body of scientists.

What is the remedy? If we can not cure tuberculosis, we should at least attempt to prevent it as far as is in our power, and experiment with a view of discovering a cure. With this in mind, the duties of a practitioner become delicate and difficult, but he can not uphold professional dignity and manhood, and shirk them. In my humble judgment he should treat a patient with tuberculosis with the fact uppermost in mind that it is a contagious disease; he should not feel above inquiring into the nature of the milk, meats and other foods the patient has been using, even if a personal inspection of animals is necessary; then he should prescribe according to the finding. (To this end, by the way, the study of comparative anatomy, physiology and pathology would be a valuable acquisition to even the most learned M. D.) The physician, in other words, is the man to instruct the people concerning the dangers of tuberculosis (and other diseases, for that matter), which are transmissible from lower animals to man. On the part of the people, they should be informed that boiled milk is as good and nutritive as raw, and that by being boiled it is purified. The experiments of Bang, Peuch, and others, prove that virulent milk heated to seventy degrees centigrade transmits tuberculosis easily, both by ingestion and by inoculation; that milk heated to eighty degrees centigrade transmits it too readily by inoculation; that infected milk, in a word, must be heated to eighty-five degrees centigrade, a few minutes, to become free from live germs of the contagious consumption. We can readily understand this when we know that the virus of tuberculosis, sealed in a glass tube, and heated at a flame twenty minutes, at sixty degrees centigrade, was found to be still inoculable; and that some other virus, heated ten minutes at seventy degrees in a similar manner, was yet inoculable.

The people should be made aware that only perfect and complete cooking of meats, through and through, relieves from danger meat that contains the germs of consumption. A piece of meat in the form of a roast, cooked on the grate, at a temperature that does not cook the center perfectly, still remains virulent.

In conclusion, I will say that in the hands of Mr. Galtier, a French veterinarian and sanitarian of authority, the fact was established that salt meats of tuberculous animals were

found virulent after some months; and that buttermilk and cheese, fresh and salted, and even cheese ten months old, produce tuberculosis by direct inoculation of the virus. Sooner or later we will see better sanitary laws concerning man. But a perfect system will come only when legislators do not feel themselves greater than their employers, and more competent to judge of necessary sanitation than scientific and practical men; and when the neglect, causing sacrifice of human life, is better understood, and have so excited the ire and just indignation of the people as to exact protection from the government. But, in the meantime, physicians should urgently plead for better sanitary ordinances in cities and towns. It is variously estimated that at the present time between one-fifth and one-sixth of the deaths in the world are due to tuberculous consumption. Some very serious and honest statisticians put it much higher even than that proportion. When and where shall this cursed decimation by one cursed plague be curbed?

I can not help but feel some indignation at the unjust and ridiculous agitation made against so-called big-jaw in cattle, which although inoculable and doubtless unwholesome and impure and improper for food, yet does not transmit itself perhaps to one person in five thousand, whilst to protect against the actual and multiplied dangers of daily occurrence to every family against tuberculous milk alone, scarcely a word is said. Occasionally a city ordinance is passed or amended to inspect the dairies and the milk; an honest but incompetent officer is appointed to see cows occasionally, and a chemist to see that the milk is not watered. Then the people think themselves quite safe. The position is a grave, and almost criminal, absurdity. Milch cows and milk so inspected, no matter how honest the officers, are absolutely as dangerous as before. None but competent and expert diagnosticians and pathologists can perform such duties safely.

CREOLIN.—Creolin is praised very highly by Dr. Heinrich Rausche as an antiseptic of undoubted power, which is harmless to the human organism. It furthermore possesses the advantage of cheapness, and does not stain instruments like corrosive sublimate. It is used in one-half to three per cent. solutions.

Operative Procedure in Traumatic Epilepsy

BY J. T. WILSON, M.D., SHERMAN, TEXAS.
PRESIDENT OF NORTH TEXAS MEDICAL ASSOCIATION.

Read before the Southern Surgical and Gynecological Association.

REFLEX epilepsy from traumatic injuries of the brain is not a rare trouble, and nearly every surgeon meets with one or more cases during his professional life.

I believe it to be proportionately the most curable of epilepsies. It is a very important affection and requires more study from the general practitioner than is usually given it. The great mistake is too frequently made by either not operating at all or waiting too long. In truth, the tendency in these cases is too frequently to neglect them, or prescribe only a palliative treatment. In this day of rapid surgical advance, when the hitherto sacred precinct of the cranium can be invaded with so much less hesitation than in former years, and with such comparative safety since the introduction of antiseptics, and with the brilliant record of brain surgery before us, where tumors and other pathological lesions are diagnosed and removed with such splendid results as to astonish the world, no epilepsy caused by a depressed fracture should be permitted to progress without giving the unfortunate and wretched victim an opportunity to receive the benefits an operation might bring. Trephining does not aggravate the convulsions, and even if no benefit should result, it does not leave the patient in a worse condition, when he has been properly prepared for it and the operation is carefully done under strict modern rules.

Though hemiplegia exist and its liability to remain as taught by the English surgeons should not deter us from operating and curing the fits if possible. In my limited experience in this disease the convulsions in a majority of cases are extremely severe, sometimes quite frequent, and usually, to a great extent, one-sided; that is, the muscles of one side are nearly all involved in the spasm, though not in the same degree; the muscles of the face and the upper extremity of that side are in most cases more affected than those of the trunk and lower extremity. Antispasmodics generally have less control over them than over the attacks from other causes, and their controlling influence does not last so long. In a majority of the cases that I have seen the

general health was fairly good ; they had morbid appetites and ate ravenously large quantities of food, and in all the cases coming under my observation, to the best of my recollection, the frontal, temporal and anterior region of the parietal bones sustained the injuries.

General treatment, attention to the general health with tonics, antispasmodics, and more especially the bromides, would always lessen the severity, and to some extent, the frequency of the attacks for a while ; but the bromides largely, given for any considerable length of time, seemed to have a deleterious effect upon the health of this class of cases, and also seemed to have a more unfavorable influence upon the mental state, inducing early dementia. Persons predisposed to epilepsy, or very nervous and excitable, who are very susceptible to nervous shocks, are more liable to epilepsy from fracture or other injuries of the skull and scalp than those who are differently constituted.

In one patient a slight depression will produce it, in another a deep one will not, though both occur in the same locality ; and in these nervous cases especially is an operation likely to do good, but in all it is of paramount importance to do the operation thoroughly.

In this connection I will report two cases illustrative of the object I have in view, that taught me an important lesson in regard to operating upon the skull and brain for epilepsy caused by an injury, and the lessons there learned served me a useful purpose in other cases.

CASE I.

J. H. O., American, male, aged forty, married, occupation farmer. No reliable family history could be obtained, nor of himself, except that he had always been very nervous and excitable. General health fair, though not robust, of very nervous temperament. Was affected with chronic melancholia. Attempted suicide by cutting through his skull with the sharp corner of an axe, the wound being through the coronal suture, involving the frontal and parietal bones and about half an inch above the temporal bone of the right side. Not succeeding by this means, he made another attempt, a few days later, by driving a No. 6 nail through the opening in the skull made with the axe. This nail was driven for more than an inch into the cerebral tissue. A physician saw him soon after and extracted it, dressed the wound by the ordinary, old-fashioned method ;

some suppuration supervened and the wound closed by granulation; paralysis of left side gradually came on; in six weeks was almost complete. A few weeks after the closure of the wound he was attacked with epileptic convulsions, and they recurred at intervals of one to three weeks for several months, and as time passed they grew more frequent and severe. Bromides in full doses seemed for a while to lessen the severity, but not the frequency of the attacks, and finally seemed to lose all effect over them, and after the use of them for several months his digestion began to suffer, and symptoms of beginning dementia were strongly marked, but, strange to say, the paralysis slowly improved sufficiently to enable him to walk about with the assistance of a cane.

At the end of nine months from the reception of the injury the bromides were discontinued, he was put upon a tonic regimen for about two weeks, when he was anæsthetized, the scalp shaved and a crucial incision made over the old cicatrix; as the scalp was dissected up and drawn back there was found a small oblong depression of the skull, and in the centre a small opening leading down to the dura mater, the bone having sloughed away. The trephine was used, and two buttons removed embracing the entire length of the depression. A thick cicatrix of the dura mater was observed, but it looked healthy, and it was thought the epilepsy was caused by the depressed bone; it was not, therefore, interfered with, and after all the depressed bone was removed the wound was closed by the ordinary method; it healed readily under cold water dressings. He improved rapidly for three months, had no convulsions, general health improved, paralysis improved so much that he could walk comparatively well with the assistance of a cane, and go wherever he desired; his mental condition also mended considerably, was more cheerful than he had been for months, and it was thought that his recovery would in a short time be complete. After the lapse of three months he began to get somewhat nervous and morose; appetite decreased and paralysis increased; his melancholia began to be markedly observed; he was restless, though not inclined to walk much; was troubled with insomnia, and complained of pain in the head at times that was quite severe. A marked change in his condition was easily observed. This change came on rapidly, and one morning after waking from sleep he was attacked with a severe convolution, which lasted

nearly two hours, and from which he never rallied, but sank and died in three or four hours.

The autopsy revealed a very much contracted calibre of the trephined wound, it having filled up with new tissue. The old cicatrix of the membranes was hard and firm, bulging a little, and adherent to the skin around the wound. When it was incised an abscess of the brain was revealed, in which was found a small spicula of bone about half an inch in length. The brain tissue was softened and slightly discolored for perhaps a sixth of an inch around, extending into the cerebral tissue from the abscess cavity.

If, when this patient was trephined, the cicatrix in the membrane had been cut away, the part explored, the piece of bone removed and the diseased brain scraped away, it is highly probable that his epilepsy, and perhaps his paralysis, might have been cured and his life prolonged.

CASE II.

T. M., American, aged twenty-four, farmer. Fell from a tree a distance of twenty feet, striking his head upon a hard substance and sustaining a fracture of the skull involving the frontal bone of the left side near its junction with the parietal. According to the history obtained, he was said to have remained insensible for several hours, and confined to his bed for nearly three weeks. He gradually recovered, and in the fifth week after the accident, after a day's labor of unusual severity, was attacked by epilepsy followed by another seizure the day after. Another occurred after an interval of two weeks, then continued at irregular intervals for fifteen months, the attacks growing more frequent and severe, any unusual mental and physical exertion bringing them on. Very little benefit was obtained from internal treatment; his digestion was much disturbed by large doses of bromide; he had a morbid appetite; his intellect was dulled, and his case presented a gloomy prospect.

After about ten days' preparation he was trephined, two buttons of bone removed, a small piece of the internal table lying loose was taken away; the wound closed up and healed without trouble; he was confined to his bed for ten days, and in fifteen days after the operation left his room. He seemed to be doing well until twenty-one days after the operation, when he had a mild epileptic attack, and these attacks continued with variable frequency and severity for four months, when it was again determined to resort to

operative procedure, which was accordingly done. A U-shaped incision was made, the flap turned back and two buttons of bone removed from the sides of the old wound. A tense cicatrix of the dura mater presented, and was carefully removed entire. The brain beneath presented no perceptible pathological lesion; the wound was washed with warm carbolized water; the scalp dissected up for nearly an inch around the wound, edges brought together with silk suture and closed up. The patient recovered without an untoward symptom; and five or six spasms in the following three months, when they ceased altogether, and after five years—when heard from a few months ago—he had no further trouble, but remains well and able to cultivate his farm.

These operations were not done under strict antiseptic rules, as the practice had not come into such general use as at the present day; but, in the second case, warm carbolized water was used. This experience taught me that in all cases of trephining, when the bone is removed the part of the brain and membrane exposed should be carefully examined, and if a cicatrix exists, it should be removed, as also any foreign substance or pathological lesion of the brain should be cut or scraped away, under thorough antiseptic precautions. If hemorrhage occurs, and continues after washing with hot water, and if the bleeding vessel or vessels can not be ligated, the cavity can be very carefully and lightly packed with antiseptic wool, care being taken that the packing be not too tight, as the pressure thus made might result in mischief, and as soon as the hemorrhage has been controlled it should be removed.

It is not the pressure of the bone in every instance that causes the reflex disturbance, for the brain will sometimes become accustomed to this pressure, if not too great, and its functions go on as before, after recovering from the shock of the accident, but if the membranes have been lacerated at the time, or sustained some other injury, followed by a circumscribed meningitis, a cicatrix will form, possibly adhesions and some contraction take place, the cortical substance will be irritated, and from this cause convulsions are liable to ensue, or circumscribed inflammation may extend to the brain and abscess result, or a spicula of bone may be driven into the cerebrum and its presence excite the disease; therefore these sources of irritation should always be looked for and removed. Mr. Horsley thinks that after a button is removed, if it is noticed that the dura mater bulges

through the opening, it is an indication of the existence of pathological intercranial tension.

I believe, in all cases of epilepsy caused by depression from an accident, a contracted cicatrix of the scalp, or a sensitive spot in the head (as in a case that came under my observation some years ago, which, by pressure upon a sensitive spot, would produce convulsions), trephining is not only justifiable but demanded, and should be done without hesitation. If the bone is thickened, Professor Briggs' teaching is correct—remove it; trephine a second and a third time, if need be, taking away all of the diseased bone, or even though it be not diseased, if there is much unnatural thickness, remove it, and if any pathological condition of the membranes or of the cerebrum be found, it should, without hesitation, be carefully cut away, leaving only healthy tissue, especially as regards the cortical substance, and no tense, thick cicatrix of the membranes should be allowed to remain. Even thick, sensitive cicatrices of the scalp, in my opinion, should be removed, if there is the slightest suspicion that the epilepsy is caused by the traumatism.

After these operations, the healing is materially assisted, and subsequent danger lessened, by dissecting up the scalp for a few lines around the wound in the skull before it is brought together, in order not to have too much tension by cicatrical contraction. The wound should be carefully dressed by the antiseptic method and watched, every source of supposed irritation removed, and, if possible, made to heal by first intention, to prevent an extensive scar. The general health should be looked after, secretive functions kept alive, and the nervous system tranquilized, the patient kept quiet and cheerful, away from all sources of excitement and from everything that would in any way affect the general health for several weeks after recovery seems complete. In my judgment, much of the success in many cases depends upon the proper attention to careful and judicious after-treatment.

In long standing cases improvement in the convulsions does not always begin at once; sometimes several months elapse before the improvement is marked and the habit gradually broken up, for there is a good deal in the habit the brain sometimes gets into in regard to these convulsions. Many neurologists now think that "idiopathic epilepsy has its origin in the cortex of the cerebrum, and from a surgical standpoint it is, therefore, not difficult to under-

stand that any chronic endo-cranial lesion which affects this part of the brain can produce epilepsy." Dr. Senn, of Milwaukee, in his investigations, recognizes as causes of reflex epilepsy affections or wounds of the peripheral nerves, which indirectly affect the cortex of the brain, as well as lesions of the cortex itself.

It sometimes occurs that in trephining the skull for injuries or disease the surgeon is not careful enough in his explorations of the wound, and fails to remove splinters of bone or other foreign substance, which is liable to cause an inflammatory condition, and may produce epilepsy among other troubles.

Is it too much to hope that surgery may yet come to the aid of many epileptics who are otherwise considered incurable and doomed to a life of untold misery, whether the trouble be of traumatic origin or not.

Selections.

Medical Notes.

AMONG the causes for *angina pectoris*, Professor Bartholow mentions tobacco, used either excessively or by the young.

CALOMEL being a hepatic sedative is indicated when the liver is overacting, producing bile in excess.—Professor Bartholow.

DR. VAN HARLINGEN, for *scabies* :—

R—Naphthalin,

Sulphurus,	.. . . . .	aa	3	iv.
Adipis,	.. . . . .	3	iv.	—M.

IN the treatment of *diphtheria* by mercurials, Professor Da Costa prefers minute doses of corrosive sublimate from the start, together with feeding, stimulus, etc.

FOR *dyspepsia*, accompanied by flatus, eructation and vomiting, give creasote or carbolic acid to prevent fermentation, alkalies between meals to overcome acidity.—Professor Da Costa.

FOR the *nephritis of scarlatina*, early, when the urine contains blood, digitalis is the remedy; but later, when the

urine loses its bloody character, Basham's mixture will be useful.—Professor Da Costa.

As a means of aborting *acute bronchitis*, Professor Da Costa advises hot drinks and foot baths at bedtime, and the administration of ten to twenty grains quinine; also keep the patient in the house for a few days.

FOR *amenorrhœa* :—

R—Aloes pulv.,

Ferri sulph., exsiccat.,

Terebinth alb., aā gr. xij.—M.

Fiat pil. xij. Sig.—One t. d.—Professor Parvin.

AFTER administering the antidote, pilocarpine, in *atropine poisoning*, do not neglect to draw off the urine with a catheter, for the bladder may absorb the atropine and defeat the action of the antidote.—Professor Holland.

FOR a case of *exophthalmic goitre*, Professor Bartholow directed the following :—

R—Picrotoxin, gr. $\frac{1}{40}$.

Extract ergotæ aquos., gr. iiiss.—M.

Fiat pil. j. Sig.—t. d.

In a recent case of *hysteria* at the Jefferson Medical College Clinic, Professor Da Costa prescribed valerianate of zinc, gr. ij., four times a day, and at night—

R—Chloral hydrat., gr. x.

Sodii bromid., gr. xx.—M.

Rest, milk and a nourishing and stimulating diet were prescribed. During her monthly sickness she was directed to take apiol, gr. v., six globules in the twenty-four hours before and during menstruation, the zinc preparation being omitted at that time.

IN the operation for the *excision of the testicle* great care should be exercised in the treatment of the spermatic cord; it should be tied *en masse*; always ligate the arteries separately; also veins and vas deferens.—Professor Gross.

IN some cases where the officinal syrup of iodide of iron does not agree with children, Dr. Rex found a good substitute in—

R—Potassii iodidi,

Ferri pyrophosph., aā gr. xvj.

Syrup limonis,

Aquæ menthae piperit, aā f 5 j.—M.

Sig.—A teaspoonful t. d.

A MAN whose chest and arms were covered with *tænia versicolor* was brought before the clinic by Dr. Van Harlingen, and the following prescribed—

R—Sodii hyposulph.,

Glycerin, ää 5 iv.

Aquaæ q. s. ad 5 vj.—M.

Sig.—Apply twice daily.

TO DETERMINE the site of *obstruction of the bowels*, the accumulation may often be felt through the abdominal walls with the hands; in case this can not be accomplished, the following symptoms are of value for determining the site of the obstruction: If the obstruction be high up there is little secretion of urine, if low down there is free secretion of urine.—Professor Da Costa.

FOR a case of *secondary syphilis*, at the clinic, the patient being in a weak and anaemic condition, Professor Gross directed—

R—Mass. hydrarg., gr. ij.

Quiniæ sulphat.,

Ferri sulph. exsiccat., ää gr. j.

Opii pulv., gr. $\frac{1}{4}$.—M.

Fiat pil. j. Sig.—t. d., after meals.

PROFESSOR FORBES states with emphasis that, to remove accumulated *sebum* from the ears, no ear-spoon or probe should be used, there being great danger of tearing the membrane tympani. A dilute solution of glycerin in tepid water should be used several times a day to syringe out the ear, thus softening the accumulation and allowing it to come away without the use of instruments which might injure the membrane.

FOR a boy six years old, brought before the clinic suffering with *thread worms*, the following prescriptions were given—

R—Hydrarg. chlorid. mitis, gr. iv.

Santonin, gr. j.—M.

Fiat chartæ iv. Sig.—One every hour.

After this had passed through the system, an injection of the following, a teaspoonful to an ounce of tepid water, twice daily—

R—Extract quassiæ fluid,

Extract ergotæ fluid, ää f 5 j.

Aquaæ, q. s. ad f 5 ij.—M.

--Dr. Rex.—*Coll. and Clin. Rec.*

Approved Remedies in the Treatment of Acute Epidemic Bronchitis (Influenza).

ACCUMULATED experience with the epidemic familiarly known as "*la grippe*," has already afforded ample opportunity to correctly gauge the efficiency of various modes of treatment suggested, and establish the value of different remedies employed to correct the abnormal symptoms. Of those which have proven themselves most useful, Parke, Davis & Co. call attention to some combinations which are specially adapted to meet the prominent indications.

The catarhal affections of the respiratory mucous membrane resolve themselves into several distinct phases: I. Bronchial catarrh. This is alleviated by the employment of the following formula, for which we have selected the name of "Syrup White Pine, Compound." Each fluid ounce represents:

White pine bark,	. . . .	30	grains.
Wild cherry bark,	. . . .	30	"
Sassafras bark,	. . . .	2	"
Bloodroot,	. . . .	3½	"
Balm-of-Gilead buds,	. . . .	4	"
Chloroform,	. . . .	4	minims.
Spikenard,	. . . .	4	grains.
Morphine acetate,	. . . .	16	"

One of the most marked indications for treatment is to restore the dry mucous membrane to a condition of normal secretion, to overcome the interference with respiration by stimulating the respiratory centers, and to allay the inflammation and irritation by sedatives and demulcents.

The formula which we offer under the name of bronchial sedative, has also been found admirably adapted for meeting the threefold indications specified. It has been widely used in the hospitals of this country and Europe, as well as in private practice. It is palatable and readily taken by children, and more faithfully by adults, than the nauseous expectorant mixtures so often given. Unlike the latter, it does not interfere with digestion, and may be administered as required without developing any untoward symptoms. The physician will, of course, modify the formula and dose, when necessary, to meet the requirements of the individual case.

Each fluid ounce contains :

Ammonium chloride,	. . . . .	30 grains.
Fluid tolu, soluble,	. . . . .	8 minims.
Fluid opium, camphorated,	. . . . .	4 "
Elixir licorice, aromatic,	q. s., ad.	1 fluid ounce.

Nasal catarrh, of a pronounced and persistent type, is usually associated with conjunctivitis. As there is certainly here an interdependence between the nasal and conjunctival catarrhs, the alleviation of the former is coincident with the disappearance of the latter. To remove the inflammation and reduce the discharge, the union of antiseptics and palliatives in "nasal tablets," as prepared by us after the formula of Dr. Carl Seiler, will be found of service.

Each tablet contains :

Sodium bicarbonate,	. . . . .	7 grains.
Sodium borate,	. . . . .	7 "
Sodium benzoate,	. . . . .	$\frac{7}{24}$ grain.
Sodium salicylate,	. . . . .	$\frac{7}{24}$ "
Eucalyptol,	. . . . .	$\frac{7}{48}$ "
Thymol,	. . . . .	$\frac{7}{48}$ "
Menthol,	. . . . .	$\frac{7}{96}$ "
Oil wintergreen,	. . . . .	$\frac{7}{96}$ "

One tablet dissolved in from two to four ounces of warm water will form a satisfactory solution for general use.

Among other preparations now announced by Parke, Davis & Co. as being in strong demand are pichi [*Fabiana imbricata*], quinine muriate pills, D'Ary's cascara compound pellets, and haemoglobin compound. According to the experience of physicians who have tested pichi chemically, it is especially efficacious in diseases of the urinary apparatus and of the liver. In cases of vesical catarrh, acute or chronic, dependent upon mechanical cause, such as gravel or calculus, or a uric acid diathesis, this remedy will quickly modify the urinary secretions, calm the irritability, and favor the expulsion of all gravel and calculi that can be passed through the urethra.

It favorably modifies also, chronic purulent mucous secretions. Its action on affections of the liver must be attributed to its diuretic properties. It is recommended for icterus, hydropsy, and dyspepsia due to too insufficient biliary secretions. In this case the essential oil, when absorbed and carried into circulation, acts like a stimulant of

the secretory apparatus in general; but the specific action of pichi is directed without doubt upon the organs of the urinary apparatus. It is used in the shape of a fluid extract, in doses of from four to six teaspoonfuls per day in cold water or warm.

Muriate of quinine pills are regarded now as one of the most eligible forms of administering quinine. These pills are highly soluble and secure rapid absorption and the speedy therapeutic results of this drug.

D'Ary's cascara compound pellets were originally suggested by Dr. Ralph D'Ary, in 1885, and since then have been widely used in constipation and with the result of radical cure of this wide-spread affection in most cases. The formula is as follows:

Extract cascara sagrada,	.	.	.	$\frac{4}{15}$	grain.
Extract nux vomica,	.	.	.	$\frac{1}{30}$	"
Extract belladonna,	.	.	.	$\frac{1}{60}$	"
Euonymin,	.	.	.	$\frac{1}{5}$	"
Xanthoxyllin,	.	.	.	$\frac{4}{15}$	"
Oleoresin capsicum,	.	.	.	$\frac{1}{20}$	"

In an article published in the *Medical World*, February, 1890, by F. E. Stewart, M. D., Ph. G., this author calls attention to the value of haemoglobin compound* or bullock's blood in therapeutics. He reports the experience of many physicians, who have employed successfully its stimulant nutrient properties in cases in which all other forms of nutrients were rejected. It is evident from the experience had with this preparation, that it has been of the greatest service in acute diseases in securing assimilation, and restoring vitality when the stomach is irritable or its functions more or less inoperative.

Report of Two Years of Experience in the Mechanical Treatment of Gastro-Intestinal Disturbances in Infants.

BY A. SEIBERT, M. D., NEW YORK.

By mechanical treatment of gastro-intestinal disorders we understand the washing out of the stomach and of the large bowel of the patient.

* As made by Parke, Davis & Co.

There is no doubt in our minds to-day regarding the origin of these affections of infants, in so far as we are able to trace their sources to the food getting into the digestive organs. It is immaterial whether bacteria or their products are the poisons producing the different forms of gastric and intestinal catarrh, and their consequent pathological changes, as long as we know how these germs of disease enter the body; and this question, so much debated up to within a short time ago, we may now class among those settled once for all.

The revolution this condition has brought about in the treatment of these ailments is apparent. Prophylaxis has taught us the proper preparation of infants' food, and especially its sterilization, and it is gratifying to notice the widespread interest taken in this preventive measure, although, on the other hand, we may readily see in some of our medical journals that quite a number of the authors of the typical papers on summer diarrhoea have no more correct idea of exact sterilization than many practitioners as yet have of antisepsis in surgery.

If, then, modern research compels us to prevent the entrance of infected food into the child's stomach and intestines, then logically it ought also to compel us, where such infection does occur, before all other measures are resorted to, to empty these organs of the remaining noxious material. We can state that the profession here and abroad, with few exceptions, has been too conservative and too theoretically slow in following this imperative indication—an indication so clear and logical that in a great majority of these cases we might put it into these few words: "Clean the stomach and intestines, and your patient is cured."

This indication is not a new one. The best practitioners have followed it up with medicinal agents long before bacteriology was thought of. But we can not cleanse a stomach with calomel or castor oil in such a manner as to call it clean afterward. Epstein's proposition to employ Kussmaul's method of stomach-washing in infantile gastro-intestinal catarrh has been overlooked for nearly eight years; and though Baginsky has made bowel-washing popular, and many of us have adopted it, yet, on the whole, we may say that but very few practitioners at the present date think of treating each and every case of infantile diarrhoea by large enemata.

It is not my purpose to go into detail to-day, as I have done that before in a paper published in the *Archives of*

Pediatrics, in April, 1889, but I simply wish to encourage practitioners in general to at least give this mechanical treatment a fair trial, and for this purpose I venture to report my experience to this Society. Knowing that this first meeting of the American Pediatric Society will be followed up with great interest by a large number of medical men, I hope that this may help to make known this mechanical method, so as to benefit as many little patients as soon as possible.

Since September 1, 1887, I have treated all cases of intestinal catarrh in children under three years of age under my care by bowel-washing, and all cases of acute gastro-intestinal catarrh (*cholera infantum*) by stomach and bowel-washing combined. In chronic enteritis, resulting in atrophy and marasmus, I have also washed both organs invariably, and in severe cases of infantile dyspepsia I washed out the stomach.

My cases came under observation in private practice in the children's department of the New York Polyclinic, and of the German Dispensary. I include all cases treated by Dr. W. H. Weber, my assistant at the Polyclinic, as they were nearly all seen by me, and those of Dr. R. Stein, my colleague at the Dispensary, also, who has kindly added his cases for the last twelve months, making in all fourteen hundred and four cases of gastro intestinal catarrh in infants and children under three years of age.*

Stomach-washing was employed in five hundred and twenty-one cases of *cholera infantum* (acute gastro-intestinal catarrh). Of those who reported again I can record six deaths. Every child not only stood the washing well, but also rallied more or less in every instance from the collapse it was in before washing. Not one child grew worse from this procedure, and even in the fatal cases the children evidently felt relieved, and not once did depression, convulsions, or death occur immediately after the washing.

In all cases of entero-colitis stomach and bowel-washing were employed. All children were evidently relieved, but those cases in which true inflammation of the intestines with peritonitic irritation had developed, usually ended fatally, though nausea ceased in every instance and the tem-

* The cases were not tabulated, as some could not be followed up, for the children were not brought back, and therefore these statistics are given with the full understanding that they are not perfect.

perature was usually lowered. These cases numbered eight, with six deaths.

My chronic cases (about one hundred) all got well with one exception, where the mother was suffering from acute tuberculosis and the child had been coughing since it was four weeks old. The child failed constantly and died when two and a half months old.

All cases of intestinal catarrh (diarrhoea), whether mild or severe, were treated by bowel washing, performed from one to three times daily. The effect was most gratifying to the children, their colic and pain usually subsiding. In this class of cases I did not have to sign a death certificate at the Dispensary during June, July and August of this year, hitherto an unusual result during these summer months. The enemata were given with plain warm water, medicinal additions only being made in cases of follicular enteritis with bloody stools, where a weak solution of nitrate of silver (1 to 500) was injected after the bowel had been cleansed by sterilized water.

Severe forms of dyspepsia in infants were all cured by the regulation of diet and stomach-washing, after most cases had failed to get well on proper dieting alone. Among the dyspeptics was the youngest patient, my own child, then thirty-six hours old. The little girl vomited everything brought into her stomach, including mother's milk, black tea and plain water. As her little brother, now two years old, had suffered in a similar manner during the first weeks of his life, weakening him considerably and leaving an exquisite dyspepsia for weeks afterward, I determined to clean out the stomach of the baby, which evidently, like her predecessor, had swallowed water and mucus during birth. My supposition proved correct, for a considerable quantity of water and mucus left the stomach on the catheter coming into the fundus ventriculi, and after a thorough cleansing with warm water the nausea disappeared. The baby stood the proceedings perfectly well (being no more disturbed than if its throat had been inspected by means of a tongue-depressor, and that only in the beginning) although it only weighed seven pounds and had retained no food since birth. It took the breast thirty minutes after washing, and retained the milk then and since.

A number of writers speak of stomach-washing as a rude method, apt to produce depressing effects, and even col-

lapse in the patient. They caution their readers not to employ it in collapsed children. I can not agree with these writers. The undertaking will only be rude, of those who can not look into a throat without great efforts, painful to behold and distressing to the mother and child. I have never had a refusal by the parents when I proposed this means of helping their offspring. The experiences of these authors appear to be somewhat limited, as not one of them so far has given any figures.

Collapse in cholera infantum, to my mind, is the strongest possible indication for stomach-washing, and I can make this statement: *The deeper the collapse the sooner the stomach and bowel ought to be washed.*

My last case, first seen September 14th, was a twin baby, thirteen months old. The twin sister had died in collapse due to severe cholera infantum, one hour previous to my arrival. Both breast-fed children had been attacked simultaneously two days before. The mother had nursed her children from six to ten times at night alone. The living child, like its sister, a strong, well-built baby, was very low, with pulse absent, in deep prostration. The parents expected death. No oedema pulmonum was as yet present, and so I concluded to wash out the stomach and intestines. Though the parents were very ignorant Russians, who could hardly understand me, they readily consented. The child rallied immediately and was practically out of danger the next morning, making a perfect recovery. Of stimulants, only black tea and large quantities of water were given; of medicines, only four powders of calomel, each containing one grain.

The catheter I use in stomach-washing is a soft rubber, velvet-eye tube, corresponding in size to a No. 10 steel bougie (Tiemann), or No. 13 A, thirteen inches long. Attached to this is a glass tube, six inches long, necessary to bring the outer opening lower down than the fundus of the child's stomach, and to better judge whether the escaping fluid is perfectly clear or not before withdrawing the tube. This glass tube is connected with the regular irrigator (Eissner & Co., New York), or with any ordinary clean fountain syringe.

In bowel-washing a fountain syringe will answer all purposes as long as the child's buttocks are elevated sufficiently so as to let the water run up into the transverse and the ascending colon. It is absolutely necessary that so much

water should be allowed to flood into the bowel till reactive abdominal pressure of the child throws it out again alongside of the point of the syringe. The water had better be sterilized by boiling thirty minutes.—*Archives of Pediatrics.*

A Report of One Hundred and Sixty Abdominal Sections, With Special Reference to the Prevention of Unpleasant Sequelæ.

BY MATTHEW D. MANN, A. M., M. D.,

PROFESSOR OF OBSTETRICS AND GYNECOLOGY, MEDICAL DEPARTMENT, UNIVERSITY OF BUFFALO.

(Read to the Buffalo Medical and Surgical Association, February 11, 1890.)

FROM the time of my first operation in Buffalo, January 4, 1882, to January 4, 1890, a period of eight years, I have opened the abdomen one hundred and sixty times.

The cases can be classified as follows :

Removal of ovarian tumors, one hundred, with thirteen deaths.

" " fibroid tumors alone (myomotomy), six, with one death.

" " uterus for fibroids (supra-vaginal hysterectomy), five, with no deaths.

" " diseased tubes and ovaries, fourteen, with one death.

" " diseased ovaries, sixteen, with no deaths.

" " ovaries for uterine fibroids, two, with no deaths:

" " fibro-cyst of uterus, one, recovery.

Exploratory, eight, with no deaths.

For causes outside the pelvis, eight, with two deaths.

I make a class of cases for objects outside the pelvis, because they are cases which have only fallen into my hands by accident, or through necessity. I design confining myself strictly to pelvic diseases in women, and therefore separate these cases from the rest, as not belonging strictly to my specialty.

The cases were as follows :

Resection of intestine, one, death.

Obstruction of bowels, one, recovery.

Exploratory, one, death.

Abscess, two, recoveries.

Exploratory, cancer of omentum, one, recovery.

Tumor of abdominal wall, one, recovery.

Tubercular peritonitis, one, recovery.

The deaths were distributed as follows: In the first fifty—one, in the second fifty—five, and in the last sixty—one death.

Total deaths, seventeen, or a little over ten per cent.

What stronger argument could there be than these figures to show the advantage of experience. In the first one hundred, sixteen deaths, and in the second one hundred, so far, one. Still, a careful examination of these cases would show that neither increased experience nor could anything else have saved some of the earlier cases. One died from heart clot on the third day, three from shock, one from long existing chronic peritonitis, a month after operation. Two were far gone in septicemia from suppuration of the cyst. One died from obstruction of the bowels, several weeks after operation. Eight of the seventeen cases died from sepsis, including the two who were septic before operation. It is in the avoidance of this complication that the greatest advance has been made, there having been but two cases of septicemia in the last one hundred and twenty cases. The single death in the third series of sixty cases was from obstruction of the bowels.

As regards the character of the cases operated on, it will be noticed that as compared with the reports of many other operations, there is a preponderance of operations for tumors (118) and a relatively small percentage of removal of ovaries, or tubes and ovaries.

I have been very conservative in this regard, and have frequently refused to operate on ovaries which I have been fairly importuned to remove, because I saw no good reason either in the symptoms or in the physical evidence of disease. Other cases have been operated on only after years of treatment—often in my own hands—has failed to do the slightest good.

When these cases are properly selected they are among the most satisfactory imaginable. I have followed up all the cases where it was possible, and in nearly every instance the cure has been complete. To convert a life-long invalid into a healthy, useful member of society is certainly a satisfaction, and such has been the result in many instances. It is not the place and time to detail cases, but some of those

on the list are of extreme interest, and will, I hope, form the subject for a paper at some future day.

There is a smaller and decreasing proportion of uterine fibroid tumors operated upon—this in the face of the fact that the results have been exceedingly satisfactory; only one death in thirteen operations involving fibroids. The reason is to be found in the excellent results which have been and are being attained in the treatment of these cases by galvanism. Only occasionally does a case turn up which seems proper for operation.

Now to come to the second part of my paper—the avoidance of unpleasant sequelæ after abdominal section.

Until recently surgeons have been occupied, especially in this country, with the idea that in abdominal surgery the main point is to save the patient's life regardless of after complications.

The wonderful results obtained by European surgeons, as compared with those obtained in this country, have forced American surgeons to a higher effort to improve their own records, and in this endeavor other points of nearly as great importance have well-nigh been lost sight of.

Of what advantage is it to remove a woman's tubes and ovaries, or even a tumor which itself may not be endangering life, if, in place of the disease, we leave another condition nearly as bad? Lately, thanks to the perseverance and growing skill of our operators, the statistics of abdominal surgeons in this country have been placed on a par with those of our European compeers. To-day no woman need go to Europe for the sake of improving her chances in such an operation.

It has been found that the bad results formerly obtained were not due to the peculiar nervous condition of our American women, as was often asserted, or to climatic influences, or anything except the want of proper methods. With improvement in these methods and added experience, no reason existed, or exists, why we should not be able to save as many here as in any other part of the world—and this is now abundantly proved by the facts. Laparotomy in America is now, in the hands of our best operators, as safe as any capital operation can be. This much, then, having been accomplished, it is time that we look further, and try to reduce to a minimum those unpleasant sequelæ which, while not directly endangering the life of the patient, often render life less enjoyable, and sometimes lead to its ultimate unnecessary loss. The note has been already sounded, and

the attention of operators has been, of late, frequently called to these unpleasant results.

The first of the sequelæ, to which I will ask your attention, is the production of a ventral hernia. It must be the experience of every one who has often opened the abdomen, to have his patients, after a time, return, complaining of more or less of a hernial protrusion in the line of the incision. Although it may be supported by a pad, truss, or abdominal bandage, it is certainly a very great annoyance to the patient, and, as I have lately observed, a source of danger. Quite recently I was called to see Mrs. B., with the somewhat startling statement that she had burst open. In June, 1888, I removed from this patient two very large ovarian tumors, which had existed from fifteen to sixteen years. The operation was very severe. The adhesions were extensive and very dense, and the smaller tumor had developed between the folds of the broad ligament. There was a very large oozing surface, and a drainage-tube was put in. She made a good recovery, and in time came back to know what she should do with a large ventral hernia which had first appeared at the former site of the drainage-tube, and had gradually grown upward, until a large portion of the long scar had been opened up, the skin and peritoneum only remaining intact. The patient had gained in flesh just about the weight of the tumor, viz.: sixty pounds. I advised her to wear an abdominal supporter, and if that did not do, to have the hernia operated upon.

On the evening before I was recently called, on removing her supporter, she leaned over to untie her shoes, when the hernial sac ruptured, and, like the man in the Scriptures, all her "bowels gushed out." Fortunately, Dr. Hanley was called; who washed off the protruding intestines with an antiseptic solution, and returned them to the abdomen, holding them in place with an antiseptic pad and long adhesive strips. When I saw her in the morning she was perfectly comfortable—no shock or pains, and no fever. I at once removed her to the hospital and operated. The operation was very long and tedious, as I was obliged to lay open the whole of the old incision, and to include the naval, where a hernial protrusion was beginning. I freshened the edges of the fascia, and, having brought it together with continuous catgut sutures, closed the whole with silver wire. She made a good recovery, though she nearly died from the shock after this second operation. She was sixty-three

years old. This case proves that a ventral hernia has, added to the risk of strangulation inherent in nearly all hernias, the risk of rupture.

How can this complication be avoided? Our anatomists tell us that the real supporting layer of the abdominal walls is the fascia. If this be in any way opened, the remaining structures of skin, fat, connective tissue and peritoneum, are utterly useless to withstand continuous pressure. Nor is scar tissue, unless it be keloid in its character, any better. Any one who depends on scar tissue as a supporting structure will, in the end, be disappointed. Although firm, and apparently strong at first, it becomes weaker and softer with age, and finally affords no support at all. There are three ways in which the integrity of the fascia may be interfered with. First, by failure to secure perfect apposition of the edges in closing the wound. Second, by its separation by a drainage tube, with subsequent cicatrization of the opening left; and, lastly, by a mural abscess forming below it, and opening it by its growth and subsequent rupture. How can this be avoided?

To secure perfect apposition I always make a point of carefully suturing, with continuous catgut sutures, the cut edges of the fascia. In this way, and in this way only, I maintain, can perfect apposition be ensured. In order to prevent with certainty septic infection of the tissue under the fascia, antiseptic irrigation is necessary. This can only be properly done after the abdominal cavity is closed. I, therefore, as the first step, carefully close the peritoneum with continuous catgut sutures, uniting the whole with silver wire placed entirely through the flaps. I must put in a little aside at this point. How wonderfully our ideas have changed regarding the peritoneum. In lately reading an account of his first successful ovariotomy, by Dr. Minor, I noticed that he attributed his success to the fact that he had not put any of his sutures through the peritoneum.

As to the use of the drainage-tube, I will only say that I use it very little, and then remove it as soon as possible. The dictum of somebody, "When in doubt—drain," has, I am sure, done more harm than good. I would modify the rule in this way: "When in doubt, pack the pelvis with sponges and wait." In this way drainage may often be dispensed with, and I have completely closed the cavity after packing and waiting with what seemed, at first, a very large, freely oozing surface. By the method of withholding fluids

from the stomach after the operation, the peritoneum is forced, or, rather, stimulated to take up any fluid which may be effused. This accomplishes the same thing as drainage, and depending on it, and on previous packing, I have often left out the drainage-tube where others, doubtless, would have drained. I have never regretted not having drained. I have several times been sorry that I had done it, and this brings me to my second point.

The production of a fistula or sinus, leading down deeply into the abdominal cavity, is a source of great annoyance to the patient, and is not without its dangers. These sinuses form in two ways. Either they result from an abscess which has gathered deeply within the pelvis and broken through the abdominal wound—as once happened to me—or they come through the use of a drainage-tube.

To prevent them, careful antisepsis on the one hand, and sparing use of the drain on the other, are necessary. But even if formed they heal unless they have some foreign substance at the bottom to prevent. This foreign body is generally a silk ligature. It was an experience of this kind—a fistula, which has lasted four years, and which has resisted all attempts to heal it, and which is doubtless kept open by a silk ligature at the bottom—which caused me to give up silk.

I have used no silk in the abdomen for the last one hundred and twenty-five cases, using only catgut, which I prepare myself. The objections usually urged against catgut, I consider groundless. I have left over three hundred pieces of catgut within the abdomen, and have never seen the slightest harm come from it.

For the pedicle I use No. 7, and smaller sizes for sewing and for adhesions. The catgut is prepared with ether to remove the oil. Then it is placed in a 1-500 sublimate solution for twenty-four hours, and later two or three days in a ten per cent. solution of juniper oil in alcohol, and is then preserved in alcohol until used.

Prepared in this way it is not very readily absorbed, is perfectly aseptic and reliable, and shrinks one-tenth of its length when wet with water. No. 7 will stand any strain which may be put on it.

I generally use the Staffordshire knot, putting the ends around the second time. The danger of secondary hemorrhage is imaginary. It is only necessary that a ligature should hold two or three days to ensure against secondary

hemorrhage; as is conclusively proved by the clamp method in vaginal hysterectomy. When the clamp is taken off in thirty-six to forty-eight hours, no hemorrhage results.

There is no proof that I have ever seen, that silk is ever absorbed. I have taken a piece out of the abdomen after it had been there a year. If it becomes infected at the bottom of the sinus it must be removed before the sinus will close, and to remove it, unless it comes away itself, is a matter of great difficulty, and is often impossible.

I protest, then, most strongly, against the discredit which is being thrown on catgut. If properly prepared, and you can only be sure of its proper preparation by doing it yourself, it is entirely without danger. The only case of secondary hemorrhage I ever met with was from the slipping of a silk ligature, and never have I seen any harm which I could attribute to catgut.

I have now in the hospital a case not included in this report, in which it is the greatest satisfaction to me that I used catgut. I drained, and am sorry for it. I took out the tube in thirty hours, and when, on the eighth day, I went to remove the stitches, I found the hole where the tube had been open, and the pus welling from it. The patient is doing well, but if I felt that there was a piece of infected silk at the bottom of that sinus, I should despair of ever seeing it close.

I know of no more annoying complication of a laparotomy, or, in fact, of any gynecological operation, than an attack of cystitis. It sticketh closer than a brother, and often lasts to torment the patient for weeks after she is otherwise well. This trouble always arises from the use of a catheter, the instrument conveying septic matter from the outside, which sets up fermentation within, and consequent irritation. In order to prevent this infection of the bladder, I have recently adopted a plan, proposed in Germany I think, of using glass tubes for catheters, and having a little boric acid solution injected into the bladder each time before the catheter is withdrawn. In this way, it is claimed, all danger of infection is done away with. This is a little point, but it is of great importance to the future comfort and welfare of the patient. The patient is also encouraged to get along without a catheter as soon as possible.

There are other sequelæ of laparotomy which are not so easily avoided. It has been my misfortune to see three of my patients become insane following the operation. Two

of these cases were large ovarian tumors, while the third, after removal of diseased tubes and ovaries, recovered. I know of no way of avoiding this catastrophe. Still, it must not be forgotten, and must be thought of in estimating the chances, as a possible result in each case.—*Buffalo Med. & Surg. Jour.*

Local Antiseptics in the Treatment of Syphilis.

THE Paris correspondent of the *Journal of Cutaneous and Genito-Urinary Diseases*, March, 1890, writes as follows:—

Dr. Hallopeau has recently directed attention to a question already much discussed, but which, considering its great practical importance, can not be too strongly insisted upon. I refer to the value of the local treatment of syphilitic accidents. Dr. Hallopeau regards each manifestation of syphilis as a center of multiplication of the virus—as a source of reinfection—which it is necessary to suppress. If we wish to exercise an energetic and profound action upon these accidents, we should have recourse to the acid nitrate of mercury, which is such a heroic remedy in syphilis of the mucous membranes, but which may be rendered much less painful by the preliminary application of cocaine; or we may employ the sublimate in powder, the caustic action of which is most vigorous and should be carefully watched. Dr. Hallopeau has used it as an abortive treatment for the indurated chancre. Mild solutions of the sublimate (one to five hundred, to one thousand, two thousand, or three thousand) may be applied by means of pledges of cotton to the affected parts and then covered with gutta-percha plaster, so as to constitute a permanent bath; these are most useful in all syphilitic ulcerations. Baths of the sublimate are employed where the lesions are extensive; ointments and plasters should be reserved for circumscribed manifestations.

Preparations which contain iodine as the active principle are oftentimes quite as efficacious as mercurial preparations in the local treatment of syphilides. Among them Dr. Hallopeau places iodoform in the front rank, the so-called specific action of which upon syphilitic ulcerations has been recognized. He insists that in the presence of tertiary, or even secondary, syphilitic manifestations we should never content ourselves with the administration of internal treatment alone; an active topical medication very materially abridges the duration of the treatment.—*Coll. and Clin. Record.*

Treatment of Lupus Erythematosus.

BY HENRY J. REYNOLDS, M.D., OF CHICAGO, ILL.

As the disease is necessarily associated with or dependent upon, perverted nutrition of the part, the indications are to employ remedies which tend to correct this, or to regulate its function by stimulating the physiological afflux of blood; and for this purpose a number of remedies are used, such as various preparations of sulphur, pyrogallic acid, chrysarobin, various caustics, etc. For the present we will instruct this patient to bathe the face at night with hot water, which will stimulate the activity of the affected parts, and have a tendency to produce absorption of any exudate that may be deposited in the tissues. After she has bathed the affected parts with hot water, we will have her apply green soap, being careful at the same time not to do anything to create too much irritation, because too active stimulation is rather injurious than beneficial. Only sufficient should be applied to be slightly stimulating. If this does not irritate the part too much, it may be allowed to remain on all night. We will then, next day, keep the part dusted with impalpable boracic acid. This treatment may be changed from time to time, as circumstances may seem to indicate.

As regards the prognosis, it is always doubtful as far as a cure is concerned. It is an extremely chronic affection, and may continue to exist throughout the lifetime of the individual in spite of all treatment, as there is no specific line that offers any assurance of a cure.

Fractures of the Neck of the Femur.

BY N. SENN, M.D., PH. D., OF MILWAUKEE, WIS.

1. FROM a scientific, prognostic and practical standpoint it is not necessary to make a distinction between intra and extra-capsular fractures of the neck of the femur.

2. An impacted fracture of the neck of the femur will unite by bony union, provided the impaction is not disturbed and is maintained by appropriate treatment for a sufficient length of time for the fragments to become united by callus.

3. Impacted fractures of the neck of the femur should be

treated by a fixation dressing, consisting of a plaster-of-Paris case, including the fractured limb, the pelvis and the opposite limb as far as the knee, in which a splint should be incorporated by which lateral pressure can be secured in the direction of the axis of the broken femoral neck.

4. Unimpacted fractures of the neck of the femur, both intra and extra-capsular, should be treated by immediate reduction and permanent fixation, so as to place the fragments in the same favorable condition during the process of repair as in impacted fractures.

5. Reduction is effected most readily by auto-extension and traction upon the fractured limb with the patient in the erect position, and resting his weight upon the sound limb.

6. The fixation dressing should not be removed and the lateral pressure should not be discontinued for from ten to twelve weeks, the shortest space of time required for bony union to take place.

7. Patients who have sustained a fracture of the neck of the femur should not be allowed to use the fractured limb earlier than four to six months after the accident, for fear of establishing a pseudo-arthrosis at the seat of fracture.

8. The functional result is greatly improved by passive motion, massage, and the use of the faradic current.—*College and Clinical Record.*

Cold Water in Typhoid.

FROM time to time we have drawn attention to the value of a therapeutic measure in typhoid fever, which has been so far, we think, too much neglected. While one after another of the new antipyretics has been tried, and soon abandoned owing to their depressing action upon the heart, water not only holds its own but is increasing in favor as its virtues become better understood. Let us remember once more what these virtues are. First, cold water is an antipyretic, not by depressing the vital powers, but simply by abstracting a portion of the abnormal heat; so many pints of water go into the body at thirty-two degrees or forty degrees and coming out at one hundred and four degrees will cool the mass of the blood so many degrees. Secondly, when applied to the internal surface of the body at frequent intervals, by means of a sponge, it is rapidly converted into vapor; and, according to the well-known law of physics,

when a solid is converted into a liquid, or when a liquid is turned into a vapor, cold is produced. An example of this is seen in the freezing of microscopical specimens by means of the ether spray. In exactly the same way the temperature of the typhoid patient can be kept down as low as we like. As a rule, sponging over the whole body every four hours with tepid water will keep the temperature down to one hundred and two degrees. Placing the patient in a cold bath, or keeping him in a wet pack, or having a spray of cold water playing upon him constantly, are all very effective methods, but there are manifest reasons why they should never become popular.

In order to propitiate the prejudice which the lower classes especially have to cold water, it may be necessary to add a little alcohol, which is really an advantage on account of its greater volatility.

Water in typhoid is a valuable remedy for another reason, namely because it flushes out the vital sewers. In this disease the waste is enormous, and the waste products accumulating in the blood, poison the brain, and at the same time cause a general soreness and aching of the muscles and joints. These waste products being mostly nitrogenous (urea and uric acid), the skin and kidneys should eliminate them as fast as made; and in order to do this, sufficient water for their proper solution is absolutely necessary. The fact that the urine is highly concentrated is a sufficient indication for the administration of more water in any disease. When parched with fever, there is nothing the patient craves so much for as cold water, and we can not see any reason for refusing him as much as he wants, unless it be that it might prevent us from forcing him to drink sufficient milk. Only those of us who have had typhoid can fully appreciate the pleasure derived from a cup of cold water.—*Canada Medical Record.*

Lactation During Menstruation.

EVER since the days of Hippocrates and Galen, the belief has obtained that perfect lactation was inconsistent with the return of the menses. In a paper recently read before the Royal Medical Society of Vienna, by Dr. Schlichter, the result of this belief is seriously called in question, and there seems good reason to conclude that the effect of menstrua-

tion on the milk is not necessarily detrimental. The author obtained a number of samples of milk furnished by menstruating nurses, and analyzed them with the results of showing that, as a matter of fact, the relative proportion of caseine had undergone no diminution. The quantity of fat was variable, but the variations did not exceed those met with in non-menstruating lactifers, and the maximum occurred just as often during a menstrual period as after or before. On only one occasion did the proportion of the non-fatty constituents diminish to the extent of 1.5 per cent., and the proportion remained practically the same. He remarked that in the cow the advent of the rut does not produce any noteworthy variation in the quality of the milk. Taking the results of the analyses as a whole, it was found that the variation in the quality of the milk, before, during, and after menstruation was not as marked as in milk drawn at different hours of the day under ordinary circumstances. An examination of the infants, moreover, failed to demonstrate any constitutional disturbance or failure of nutrition, provided the menses did not return earlier than the sixth week. Although we are not prepared to endorse the very categoric conclusions of the author, it may be admitted that the occurrence of menstruation in nursing women is less hurtful than has generally been believed, but it is none the less a matter of clinical observation that their recurrence does diminish the quantity of the secretion, and may even cause it to cease at an earlier date. The supervention of pregnancy is under any circumstances a barrier to continued lactation, as much in the interest of the mother as in that of the child.—*Med. Press.*

Gynecological Notes.

DR. A. A. HENSKE.

From *St. Louis Clinique.*

ANTIPYRINE IN LABOR.

STRONG testimony to the value of antipyrine in mitigating the pains in labor is borne by Prof. Paolo Negri, director of the Obstetrical Clinic at Venice. He says that his experience, based on a very large number of cases, enables him to affirm positively, 1st, That antipyrine used during parturition has never in his hands produced any ill effects whatever;

2d, that in the majority of cases it was of great use—so much so that in his clinic, antipyrine has now for several months past replaced every other drug ordinarily employed to relieve the pain of uterine contraction during labor. (Ed. in *London Med. Recorder*, Archives of Gynecology.)

[Since we noticed this article, we had occasion to try the anæsthetic effect of antipyrine in several cases of labor, and we can testify to the favorable results gained by it. The pain of uterine contraction was considerably relieved in every case, although not entirely.

ERGOT IN TREATMENT OF ATONY OF THE UTERUS.

H. Amon (*Forchheim*) recommends ergot, especially if injected hypodermically, as the remedy par excellence to be employed in severe cases of atony of the uterus. It should be even preferred to the tampon. The preparations of the secale cornutum should be freshly made. Beside the administration of ergot, other remedial measures should be resorted to in addition. Amon's position in regard to the use of ergot is based upon a large and practical experience.

VAGINISMUS CURED BY THE GALVANIC CAUTERY.

The following two cases of vaginismus treated with the continuous current have been reported by Dr. Lomer, of Hamburg :

1. Mrs. K., ætat twenty-two, married five years, suffered so much during coitus that the act had never been accomplished perfectly. She menstruated for the first time when eleven years old, and suffered since from menorrhagia and dysmenorrhœa. After other treatment had been employed in vain by Dr. Storch and himself, a mild continuous current was used, the cathode being placed on the stomach, while the anode was applied to the perineum and orifice of the vagina, the seance being repeated every third day and lasting four or five minutes. After a six weeks' treatment, the vaginismus was entirely relieved and coitus was successful and satisfactory.

2. Mrs. M., ætat twenty-seven years, married two months. She menstruated for the first time when fourteen years old, and suffered greatly of dysmenorrhœa. Repeated attempts at coitus had caused so much pain and irritation that they were abandoned. The constant current was used as in the former case, effecting a perfect cure within five weeks. Dr.

Lomer also remarks that in both cases the dysmenorrhoea was more or less relieved.

(Centralblatt fuer Gynaekologie, December 14, 1890.)

TOTAL EXTRIPATION OF THE UTERUS.

Kaltenbach reports fifty-seven cases of kolpo-hysterectomy; fifty-three for cancer, two for sarcoma, and two for prolapsus uteri. Only two patients died immediately after the operation—one from uræmia, due to ligation of a ureter, and one from supposed sublimate poisoning in a case of diseased kidneys. In several instances, the bladder, or ureter, was injured without bad consequences. Recovery was always rapid. He closes the peritoneum, having previously irrigated with a weak boro-salicylic solution. In severe cases of cancer of the corpus uteri there has been no recurrence; seven of the others are known to be well after the lapse of more than a year.

(Berliner Klinische Wochenschrift, 1889, N. 18 and 19.)

THE SURGICAL TREATMENT OF PUPERAL PERITONITIS.

At the recent French Congress of Surgery, Bouilly suggested the following method of treating puerperal peritonitis: "An incision two and one-third inches long having been made in the linea alba, a glass douche tube connected with a fountain syringe is carried with the finger among the intestinal coils, and eight to ten quarts of hot water are allowed to run; a hot solution of bichloride of mercury 1:10,000 may be used. A large drainage-tube and heavy antiseptic dressing complete the peritoneal toilet.

(Archives de Tocologie, No. 12, 1889.)

PARENCHYMATOUS MASTITIS AND PHLEGMONOUS INFLAMMATION OF THE BREASTS TREATED WITH A PLASTER-PARIS BANDAGE.

E. Meisel employs the following method of treating parenchymatous mastitis and phlegmonous inflammation of the mammae: He washes the breast carefully and covers it with gauze, allowing an opening for the nipple. Then he saturates another piece of gauze with plaster-Paris and water and places it upon the first one, covering the entire breast. This appliance is kept in place by a bandage which is renewed twice a day. Pain and fever soon disappear after the plaster-Paris bandage is applied. He treated seven cases of mastitis and five cases of phlegmonous inflammation in this manner with great success.

E. Meisel also recommends the same treatment for the purpose of suppressing the secretion of milk.

(*Bullet. Génér de Thérap.*, 1889, No. 22.)

OINTMENT FOR PRURITUS VULVAE.

R.—Hydrochlorate of Cocaine, . . . 7 grains.
Lanolin, 1 ounce.

M. et sig.: Apply a small quantity of the ointment to the area involved.

PRESCRIPTION FOR DYSMENORRHœA.

R.—Extr. of Indian hemp, gr. $\frac{1}{3}$.
Extr. of Belladonna, gr. $\frac{1}{3}$.
Cacao Butter, 5 I.

Mix and make five suppositories. For five nights before menstruation a suppository is to be introduced into the rectum.

(*Wiener Medic. Wochenschrift.*)

GENU-PECTORAL POSITION EMPLOYED AS TREATMENT.

Dr. J. N. Martin, of Ann Harbor, Mich., says:

Patients who suffer, soon after getting up from confinement, from dragging weight and pain in the pelvis, back, and sides, are much relieved by taking the genu-pectoral position three or four times a day, and especially for a few minutes before retiring; and I believe this assists much in preventing subinvolution and displacements, which are so apt to occur at this time.

For women who work hard and are on their feet all day, and who, when night comes, complain of fullness in the pelvis, with dragging pains in the back, etc., I know of no simple means that will give so much relief as the knee-chest position, with a few deep inspirations before retiring. By so doing, if there is a tendency to prolapse or congestion of the uterus, or too much traction on the ligaments, the uterus is usually replaced, circulation is improved, and the patient rests better as a result.

STILLER (*Berl. Kliwcoch.* No. 5) emphasizes the cholagogue virtues of salicylate of soda. He reports excellent results in case of cholelithiasis, and suggests its probable effectiveness in catarrhal icterus, administered in small doses. He notes also, that this drug has strong diuretic properties, and of advantage in removing serious pleuritic exudates.

Microscopy.

SOLUTIONS of logwood for staining purposes are comparatively expensive when purchased from dealers in optical goods. The druggist who works with the microscope should follow the rule of making everything himself that he possibly can at a reasonable cost. Therefore we copy from *The Microscope* the following by Heneage Gibbes, M.D., Professor of Pathology in the University of Michigan :

"Logwood stain has been made in various ways, both from the extract and from the coloring matter haematoxylin, but there has always been a difficulty in keeping the solution at the same strength. The coloring matter deposits on the side of the bottle, and after a short time the stain is useless. Another drawback I have found is the different action of various extracts, presumably from some adulteration they contain.

"The logwood solution I used for years was made from extract, with three times the amount of alum added. With some extracts this solution was ready for use in three weeks; with others, not for three months. As I had to prepare this stain for the use of large classes, it was often a serious matter having to wait so long. After trying every extract in the market, and finding they all had the same defects in varying degrees, I commenced a series of experiments with logwood chips, with the result that I have found in the following formula all that could be desired in a logwood stain :

"I find the best chips to use are those having a tawny color and not too small.

Take of

Logwood chips, 1 lb.

Distilled water, 50 ozs.

"Mix in porcelain-lined saucepan or granite iron kettle, and heat slowly to the boiling point.

"Boil for ten minutes, and, while boiling, stir with a glass rod and add very slowly from one-half to one ounce potash alum.

"The addition of the alum instantly turns the color almost black, and only sufficient alum is required to do this. The amount varies with different samples of chips.

"After the alum is added and the mixture has boiled for ten minutes, set it aside for twenty-four hours.

"Then filter, and add four ounces of alcohol to make it keep.

"If properly made it will be ready for use at once. The logwood staining solution has the following characteristics to recommend it: It is inexpensive; it is easily made; it is ready for use at once; it will not deposit on the sides of the bottle."—*Meyer Brothers, Druggists.*

The Chigger. (*Leptus Irritans.*)

BY H. M. WHELPLEY, M.D., PH. G., F. R. M. S.

A paper read before the St. Louis Club of Microscopists. Reported for the MEDICAL NEWS.

THIS is a minute insect, much smaller, but in form closely resembling the true tick (*Ixodidæ*). It varies in color from a dull brick-red to a bright blood-red. It has six well-developed legs, each one terminating in two stiff hairs. Its maxillæ are strong and elbowed, and look much like a pair of partially-developed legs. The mandibles are large and well marked internally by three indentations. After measuring twenty specimens, I found the average dimensions to be 1-5 mm. long and 1-6 mm. wide (1-125 by 1-150 inches), and the body is about as broad in front as behind. The legs are about the same length as the body and 1-40 mm. (1-2,000 inch) wide. The following illustration gives a very good idea of the animal, as seen under an amplification of about two hundred and fifty diameters:



Professor C. V. Riley gave an account of the insect in the *American Naturalist* for January, 1873, and christened it *leptus irritans*, or the "harvest mite." In its habitat it is variously known as the "chigger," "jigger," "red bug" and "harvest bug." I find what is undoubtedly the same insect referred to in a European work as the *leptus autumnalis*, or "harvest flea." In this country, this human parasite is confined to the Mississippi Valley, ranging in latitude from the thirty-fifth to the fortieth degree. It makes its appearance in the early summer, about the first of the month of June, and continues to annoy human beings until the first frost kills off the season's supply. It is most active in the month of August. The little pests are found on all kinds of vegetation, but especially on blackberry bushes. They are least likely to be found on cultivated vegetation, and do not thrive well in wet seasons. It is in the dry, hot time that the chigger adds most to the discomforts of humanity. It seems to be partial to mankind, and, as far as I know, does not trouble any other animal. They seem to attach themselves to the clothing of any one who comes their way, and immediately start out on a tour of inspection to find a suitable place to commence operations. If the underclothing is changed soon after they become attached to it, the little fellows do not give up, but patiently wait, even for several days, for the wearing apparel to be put on again, when they will crawl upon the flesh and act as lively as ever. The majority of them make for the axillæ, pubes and the inside of the thighs, while a few fall by the wayside and commence operations wherever they happen to first come in contact with the flesh. On boys and men they are very partial to the external genitals, and sometimes cause an alarming inflammation of these parts.

Within a few hours' time the animal will have completely buried itself in the integument, and causes a small red swelling with a pustulous center. This action is accompanied by intense itching, and the animal may be scratched out, but not until it has started a sore, which will take from a day to a week or more to heal. It is a curious fact that some people are never troubled by the parasites, no matter how much they are among them. It has also been noticed that persons from other parts of the country will have much more severe sores than the natives of the part of the country where they abound. After one or two seasons, a stranger becomes acclimated, and is not excessively irritated by

them. I well remember my first season's experience, but subsequent summers I did not fare worse than the average persons.

The methods of treatment are numerous, for, although the sores are not dangerous, they are very disagreeable, and many things have been tried to cure them up quickly. Among the principal applications are raw salt pork, bacon fat, water of ammonia, chloroform, ether, carbolic acid and glycerine or oil (eighty grains to one ounce), sulphur ointment, salt water, bicarbonate of sodium solution. The most effectual method is to look for the individual insects by aid of a magnifying glass, and remove them with a pin-point. They are very active before they get located, and will travel with considerable rapidity. Children become expert at catching them when on the flesh, and I have known of more than a score being removed at one hunt before any had found time to take hold of the flesh. The fat salt pork grease is the most popular application for the sores, but the glycerine and carbolic acid is undoubtedly as effectual. The pus-tule should be opened and the pus removed before the lotion is applied.

Judging from the immense numbers that make themselves manifest by attacking man every year, the chigger must be a very prolific animal. Its mode of life shows that vegetation is its normal food. But, like the man-eating tiger, the chigger that once tastes human blood has no more use for its former food, and perishes in a vain attempt to devour all mankind.

To the microscopist, the chigger is an object of interest. It makes an interesting and popular mount. In order to obtain the animal in all its glory, it should be caught while seeking a lodging place on some one's body. Place it directly into glycerine, and mount in the same medium while the animal is endeavoring to swim; then you will have a perfect specimen in good position to study. Examine with a 4-10 inch objective.

The literature on the subject is exceedingly scarce, the article by Professor Riley, to which I have referred, being the only one of note that I have been able to find.

Gleanings.

THE ADMINISTRATION OF CHLORAL.—Widerhofer recommends the following in the treatment of convulsions in children :

Chloral,	gr. viiss. to xl.
Water,	fʒii.
Syrup of bitter orange peel,	fʒv.

Teaspoonful to be taken every two hours.

The following has been recommended by Yvon for administration to adults :

Chloral,	gr. xxx. to xl.
Bromide of sodium,	gr. xxx. to xl.
Syrup of codeine,	
Syrup of bitter almonds,	āā fʒss.
Water,	fʒii.

The following is likewise recommended by Yvon in cases of asthma and dysnœa :

Chloral,	gr. xxx. to lx.
Iodide of sodium,	gr. xxv.
Simple syrup,	fʒv.

Tablespoonful to be given every hour.

As an enema in infantile convulsions the following has been proposed :

Musk,	gr. iii.
Chloral,	gr. viiss to xv.
Camphor,	gr. xv.
The yolk of one egg.	
Water,	fʒii.

As a suppository chloral may be used in the following combination, in which the caustic and irritating action of chloral is largely overcome :

Chloral,	gr. viiss.
Extract of belladonna,	gr. ½.
Cocoa-butter,	gr. xl.

—*Revue Generale de Clinique de Therapeutique*, December 19, 1889.

TREATMENT OF POST-PARTUM HÆMORRHAGE.—Dr. Dirska, in the *Berliner klinische Wochenschrift*, February 24, 1890, describes a method of treating post-partum hæmorrhage which he has practiced successfully on more than thirty cases, excluding patients who when first seen were *in articulo mortis*. After the uterus is thoroughly emptied, it is

grasped through the abdomen, and with the other hand two or three pieces of clean and transparent ice the size of a walnut are carried into the uterus and upper part of the vagina, where they are allowed to remain a few minutes. The external compression of the uterus is continued for fifteen minutes. According to the author, the bleeding stops immediately and permanently. The previous complete emptying of the uterus he considers of great importance, as clots will prevent thorough contraction.

Dirska has never seen bad symptoms follow this treatment, but he insists on the importance of using as pure and germ-free ice as is obtainable; moreover, he suggests that in hospitals ice might be artificially made for the purpose from sterilized water. After using ordinary ice, the risks of septic infection can be reduced by intra-uterine injections of an ice-cold antiseptic solution. Cold fluids, however, can not be used in place of the ice, as the latter acts not only through its temperature, but by virtue of the fact that it is a foreign body.

REPORT OF A CORONER'S JURY.—The ways of coroners' juries are proverbially inexplicable, and their verdicts are often marked more by originality than sense. The *Memphis Appeal* of a recent date gives the following sample of such imbecility: "The investigation developed the fact that the dead woman's skull was cracked, exposing the brain. The mother, husband and little child of the dead woman were all examined by the jury, but their evidence failed to show the cause of the strange opening in the skull."

"There being no further evidence in sight, the jury retired for deliberation, and returned its verdict, which was that the woman died suddenly from a natural cause, produced by an expansion of the skull."

Of course, no post-mortem was held.

CURATIVE EFFECT OF ERYSIPelas ON TUMORS.—Bruns (*Monatsh. fur Prakt. Derm.*, vol. viii., No. 4) relates twenty-two cases of tumors which were the seat of an idiopathic erysipelas. Amongst these cases three of sarcoma (diagnosis confirmed by microscope) were permanently cured. Two cases of multiple keloid after burns were completely cured. In four cases of lymphoma of the neck some of the glands disappeared and some became smaller. In five cases erysipelas was artificially produced. In three cases of carcinoma of the mamma one was not changed, one became

one-half smaller, and one was reduced to a small induration in the scar the size of a pea. A multiple fibro-sarcoma was diminished. An orbital sarcoma was unchanged.—*London Medical Recorder.*

SULPHIDE OF CALCIUM IN PHTHISIS.—Dr. Witherle [*La Clinique*] claims to have obtained good results in the treatment of phthisical patients by the internal administration of sulphide of calcium. He commences by giving a pill containing one-half grain of the sulphide every two hours, and he gradually lessens the intervals between the doses until eructations or other symptoms of gastric irritation show that the limit has been reached. In most cases patients were able to take two pills every hour, and their general condition in every instance appeared to improve. This is, in reality, an indirect method of introducing sulphuretted hydrogen into the blood, and the principle is the same as that underlying Bergeon's treatment.—*London Medical Recorder.*

HAY FEVER.—Dr. Jacquess, writing for the *Med. Brief*, says of the following remedies. My wife has been a sufferer from hay fever for fifteen years, and they are the only remedies I have found to relieve her:

R.—Liq. Arsenical, 1 drachm.
Tinct. Belladonnæ, 2 ounces.

M. Sig.—Five to ten drops, three or four times a day, commencing three or four weeks before the expected attack.

Also :

R.—Glycerini, 1 ounce.
Acid carbol, 20 drops.

Apply up the nose and bathe the eye-lids, two or three times a day. For the cough use the glycerine and carbolic acid internally.—*Canada Lancet.*

TREATMENT OF CONFLUENT VARIOLA.—The following treatment of confluent variola, quoted from the *Rev. gen. de Clin. et de Ther.* of July 4th, is recommended by Dr. Beaudoin, of Mouy, France.

i. Apply, three times a day, the following salve to the face, neck, limbs, and body :

R.—Salicylic acid, 10 parts.
Vaseline, 225 parts.—M.

2. After each application of the ointment, dust the entire body with the following powder:

R.—French chalk, 125 parts.

Salicylic acid, 5 parts.—M.

3. Give, daily, three capsules of sulphate of quinine containing four grains each.

4. Gargles of borates will be found valuable.

5. Milk diet should be enforced.—*Medical Progress.*

SOLUBLE CAFFEINE.—The insolubility of this useful alkaloid, caffeine, is well known. One substance after another—bicarbonate of soda, citrate of soda, and, last of all, benzoate of soda—have been employed to insure a perfect solution. If it is necessary to prescribe a large quantity for a course of treatment lasting several months, M. A. Cabanés suggests the following formula:—

R.—Caffeine,

Benzoate of soda, $\frac{1}{2}$ 25 parts.

Alcohol, sufficient to make a soft paste, which is subsequently dried with moderate heat.

This product contains fifty per cent. of caffeine, and is soluble in a little more than its own weight of water.—*L'Organe de la Confraternite.*

FOR CHOLERA INFANTUM.—

R.—Bismuth subnitrate, $\frac{3}{4}$ j.

Tinc. opii, 5j.

Tinc. catechu, 5ij.

Creosote, gtt. iij.

Mist. cretæ, q. s. ad. 5ij.

M.

Sig.—Shake well and give a child from two to three years old one teaspoonful every two or three hours according to circumstances, and as soon as the discharges become less frequent prolonging the interval—giving at the same time large drafts of cold water to supply the great loss due to the rapid escape of the liquor sanguinis, at the same time using hot mustard baths. J. G. STEPHENS, M.D.

Sydney, Iowa.

DEATH IN COURT-PLASTER.—The “isinglass court-plaster,” that is so much in vogue with the laity and dilettanti medicals, is a material most plenteously pregnant for evil. It furnishes an ideal atmosphere and pabulum for bacteria, and has sent many an unfortunate to the ground. It

is questionable whether it can be disinfected so as to be safe. Phlegmon, pseudo and true erysipelas are its most usual companions, its most frequent victim being the accommodating and officious person (or his friends) who carries it about his person for emergencies, and who dispenses it with a "lick and a stick."—*Dr. A. R. Jenkins in the Annals of Surgery.*

AN UNUSUAL ACCIDENT ATTENDING TOOTH EXTRACTION.—To the record of the numerous casualties which may follow tooth extraction Mr. Ackery, at the Odontological Society of Great Britain, has added another probably unique case. A molar was extracted from a patient while under the influence of nitrous oxide gas; the apex of one root, however, was left behind. A sinus subsequently appeared, and this did not heal upon the removal of the remaining portion of the tooth. Eight years after the original operation a substance was discharged from the sinus, which proved upon examination to be the point of one of the jaws of a tooth forceps, which had doubtless been broken and left in the alveolar process at the time of the endeavor to extract the tooth.—*The Lancet.*

A TAIL IN THE HUMAN SUBJECT.—Dr. Piatnitsky reported the case of a peasant, aged twenty-three, who came to see if anything could be done to relieve him of a tail, which was a source of chagrin as well as of inconvenience to him. In the anal groove was a cylindrical tumor, about three inches long and three-fourths of an inch in diameter, covered with rather long hair. The tumor, which was attached to the coccyx, was removed. It was composed of a connective-tissue stroma, with vessels and nerves and striated muscular fibres arranged in three bands in each half of the appendix. Most of the muscular fibres had undergone fatty degeneration. The presence of muscular tissue led the reporter to regard the tumor as a true caudal appendix, and not as a simple new growth.—*Meditinskoye Obozreniye.*

DANGERS OF CHLOROFORM IN LAPAROTOMY.—Professor Zweifel, of Berlin, has remarked several times that pneumonia has occurred after laparotomy has been performed under chloroform, either at night or on dark days when gas had to be used. In some cases, which were done in a small, badly ventilated room, where a good many bystanders were

present, and two or three Argand gas burners were in use, a peculiar cloud of partly decomposed chloroform vapor was very noticeable, not only to the eye, but by the effects produced on the respiratory organs of the operator and his assistants. When ether was used these effects were not observed. Pending the establishment of the electric light, Professor Zweifel commences with the mixture of alcohol, chloroform, and ether alone, the patient being put under the influence of this in another room, ether being subsequently used during the operation.

BELLEVUE REMEDY.—The following is the prescription for an expectorant mixture much used in Bellevue Hospital:

R.—Ammonii carbonatis, . . . gr. xxxij.
 Extr. senegæ fluidi,
 Ext. scillæ fluidi, . . . aa f 3 j.
 Tr. opii camph., . . . f 3 vj.
 Aquæ, f 3 iv.
 Syr. tolutan, . . . q. s. ad f 3 iv.—

Dissolve and mix. Dose, a teaspoonful.

As a gargle for inflammatory troubles, Dr. Abraham Jacob's "Special" is used:

R.—Potassi chloratis, gr. lxxx.
 Tr. ferri chloridi, . . . m clx.
 Glycerini, f 3 ij.
 Aquæ. q. s. ad f 3 viij.

Dissolve and mix. Used as a gargle and internally in doses of half ounce.—*Med. & Surg. Rep.*

TREATMENT OF ANAL FISTULA WITHOUT OPERATION.—Fistulæ which do not cause pain should not be operated upon. The clothing should be soft and smooth, and extreme cleanliness should be observed, the general condition of the patient should be attended to, and of systematic remedies a mixture of the bromides and iron is especially valuable. The following is an excellent remedy: Bromide of potash, 10 grams; citrate of iron, ammoniated, $\frac{1}{2}$ gram; syrup of bitter orange peel, 190 grams. Tablespoonful should be taken morning and evening.

Topical appliances should be made after each stool. Here is a good formula for suppositories: Iodoform, $\frac{1}{10}$ gram; extract belladonna, $\frac{1}{50}$ gram; cocoa butter, q. s. This should be applied after each defecation and on going to bed.—*Professor Guyot, Jour. de Med.*

SUPPRESSION OF A MEDICAL JOURNAL.—Dr. Grant-Bey, writing to the Albany *Medical Annals*, states that the Egyptian Government has suppressed the *Shifa*, a journal published in Cairo in the Arabic language. First the subscriptions were withdrawn, and then, finally, notice of suppression was served. The article which was offensive to the British Government in Egypt was an account of a visit by Virchow to Dr. Grant-Bey, in Cairo, written by the latter, and discussing the nature of cholera and the necessity of strict quarantine on every arrival from India.

THE MICROBE OF CANCER.—Dr. Lampiasi-Rubino has been studying the micro-organisms present in various neoplasms (*La Reforma Médica*), and comes to the following conclusions: 1. In malignant growths, epithelioma, sarcoma, scirrhous and encephaloid carcinoma, there is constantly found a specific bacterium distinct from all other pathogenic micro-organisms. 2. This microbe is not found in benign tumors like fibromata or lipomata. 3. The micro-organism causes a general infection and often death in the lower animals. 4. It is probable that the production of malignant neoplasms and of the general carcinomatous cachexia following them depends upon the presence of this micro-organism.

TREATMENT OF HÆMORRHOIDS.—Kossobutsky prescribes (*Revue de Therapeutique*):

R.	—Chrysaroline,	. . . . .	0 grammes, 8.
	Iodoform,	. . . . .	0 grammes, 3.
	Extract of Belladonna,	. . . . .	0 grammes, 3.
	Vaseline,	. . . . .	25 grammes.

M.—Sig.—Apply.

In the case of internal hæmorrhoids, he uses the following suppositories:

R.	—Chrysaroline,	. . . . .	0 grammes, .08.
	Iodoform,	. . . . .	0 grammes, .02.
	Extract of Belladonna,	. . . . .	0 grammes, .01.
	Cacao Butter,	. . . . .	2 grammes.
	Glycerine, q. s.		

M.—Make suppositories.

If hæmorrhage is profuse, tannin is added. The author has seen the most intense pains and hæmorrhages disappear in three or four days, and the trouble itself almost completely relieved in three or four months.—*Medico-Chirurgicale—Times and Register*.

ENTRANCE OF AIR INTO A VEIN.—At a meeting of the French Surgical Society on July 4th, M. Reynier said that he had recently removed a mass of enlarged glands from the neck, and during the operation had heard a gurgling sound like that produced by the entrance of air into a vein. No bad effects were noticed at the time, but on the third day, while dressing the wound, he heard the sound again, and the patient suddenly died. At the autopsy a small opening was seen in the internal jugular vein, and the vessel was seen to contain a number of bubbles.

POTASSIUM PERMANGANATE IN AMENORRHœA.—Dr. P. W. McDonald relates several cases in *The Practitioner* for June, 1888, of amenorrhea associated with mental disease, in which permanganate of potassium, in doses of one or two grains three times a day, was prescribed. In six of the nine cases the mental faculties and utero-ovarian functions were restored, in three the utero-ovarian functions but not the mental equilibrium. In two of these three cases the menses ceased some time after the pills were discontinued. The writer believes that in these cases the remedy was stopped too soon, and he says that permanganate should be continued for at least three months after the catamenia appear, and on no consideration should the patient cease taking it between the periods.

IGNIPUNCTURE OF THE TONSILS.—Dr. Wilhelm Roth, of Fluntern, finds that in order to reduce the size of the tonsils without risk of troublesome haemorrhage, which is not uncommon, especially in young subjects, the best plan is to employ ignipuncture, as has been recommended by Krishaber, and more recently by Verneuil. The tonsils and neighboring parts are first brushed over with a ten to twenty per cent. solution of cocaine. The finest point of the thermo-cautery, heated to redness, is then inserted to a depth of about five millimetres in three or four spots a few millimetres apart from one another on the tonsils. The instrument is not allowed to remain more than one or two seconds in the tissue. The whole operation, including both tonsils, can be performed in a very few minutes without any bleeding and with scarcely any pain. It must be repeated four or five times, at intervals of two or three days, and this is usually sufficient to cause the tonsils to return to their ordinary condition.—*Lancet*.

USEFUL FORMULA IN CHRONIC RHEUMATISM.—Dr. Daniel R. Brower, in a clinical lecture on a patient suffering with chronic rheumatism, fatty heart and fatty liver, published in the *North American Practitioner*, May, 1889, suggests the following formula to aid in the removal of uric acid from the system, and to sustain and improve the action of the heart and of the liver:

R.—Lithiae citrat,	3 ij.
Strychniæ,	gr. j.
Tinct. Strophanthi,	f 3 iss.
Aquæ menth. pip.,	q. s. ad. f 3 iv.
M. Sig.—Teaspoonful before each meal in water.	
R.—Aloes,	gr. ij.
Pulv. Ipecac,	gr. j.
Pulv. Rhei,	
Ferri sulph. exsiccat.,	
Ext. Hyoscyami,	ää gr. x.
M. Div. in capsules No. X.	
Sig.—One at bed-time.	

IODIDE OF POTASSIUM IN PSORIASIS.—Barduzzi has found that his results from the employment of potassium iodide in psoriasis agree with those of Greve, Boeck and Haslund. In three diffuse, universal cases of very inveterate character, which had been treated with transient success by all the usual remedies, he obtained better results from potassium iodide than he had anticipated. In none of the cases was the amount of the drug given larger than seven grammes [105 grains] *per diem*.—*Gazetta de Ospidali*, No. 17, 1889.

COLD CREAM.—The formula which we find in the U. S. Pharmacopœia for making this preparation is as follows: Take of

Expressed oil of almonds,	50 parts.
Spermaceti,	10 parts.
White wax,	10 parts.
Rose water,	30 parts.

Melt the oil, spermaceti and wax, and then gradually add the rose water, stirring the mass constantly. I have found that if the quantity of wax be doubled the resulting mass is one of firmer consistency and makes a much better ointment base, as it does not melt so easily. It is stiffer, and a thicker layer can be laid on. To make a delightful and anti-septic "camphor ice," add 10 parts of campho-phenique to the melted wax and fats, instead of the rose water.

ANTISEPTIC MIXTURE FOR SOFT AND WAXY CONCRETIONS IN THE EAR.—It is suggested, with the view of facilitating the removal of accumulations of wax in the external auditory meatus, that the following antiseptic preparation should be made use of: Rx.: Acid. boric., gr. 55; glycerini puriss., 3 jss; aquæ dest., 3 jss. This should be warmed and instilled into the ear, leaving it there for a quarter of an hour, and repeating the process for a day or two. The result is to soften the plugs and make their removal comparatively easy by means of the syringe.—*London Medical Recorder*.—*Albany Medical Annual*.

Book Notices

A NEW MEDICAL DICTIONARY: INCLUDING ALL THE WORDS AND PHRASES USED IN MEDICINE. WITH THEIR PROPER PRONUNCIATIONS AND DEFINITIONS. BASED ON RECENT MEDICAL LITERATURE. By George M. Gould, B. A., M. D., Ophthalmic Surgeon to the Philadelphia Hospital, and Clinical Chief Ophthalmological Department, German Hospital, Philadelphia. With Elaborate Tables of the Bacilli, Micrococci, Leucomaines, Ptomaines, etc.; of the Arteries, Ganglia, Muscles, Nerves and Plexuses; of Weights and Measures, Thermometers, etc.; and Appendices Containing Classified Tables with Analyses of the Waters of the Mineral Springs of the United States, and Tables of Vital Statistics. Small Octavo, Pp. 519. Half Dark Leather. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$3.25. Half Morocco, Thumb Index, \$4.25.

In preparing this work, it is stated, that it has been the purpose—1. To include those *new words* and *phrases* created during the past ten years—a period rich in coinages—which appeared destined to continuous usage. There are certainly thousands of these, and in their compilation it has been especially the endeavor to cover the latest results in the study of bacteriology, ptomaines, leucomaines, electro-therapeutics, embryology, physiology, pathology, etc., and in the various special branches of medicine, such as ophthalmology, otology, laryngology, gynecology, etc.

2. To frame all *definitions*, by the direct aid of *new, standard*, and authoritative text-books, instead of making a patchwork of mechanical copying from older vocabularies.

3. While neglecting nothing of positive value, to *omit obsolete words* and those not pertinent to medicine except in a remote or factitious sense.

4. To make a volume that will answer the needs of the medical student and busy practitioner, not only by its *compactness of arrangement* and *conciseness of definitions*, but also by its *convenience of size and price*.

The number of new words that has been introduced, in the last fifteen years, in the various departments of medicine is very great indeed. So great indeed is the number, that it is quite impossible now for an intelligent physician to get along without a medical dictionary. Previous to the time mentioned we do not believe that one medical man in ten had a work of the kind, for there were but few technical terms that were not to be found in what was then considered the *seven branches of medicine*. Consequently, when a medical student had fully stored his mind with the lore contained in the limited number of the text-books of those days, he seldom met with a word or phrase with the meaning of which he was not familiar. But with the thousands of new words and phrases which have been introduced into medicine within but a few years, in consequence of the great progress that has been made by unceasing investigations with the microscope, test-tube, and many other instruments of research, and by constant experiments in the way of vivisections, and other manipulations, it is quite impossible for any physician to retain in his memory the meaning of the legions of new terms he constantly meets with in reading new works and perusing the articles in the medical journals on subjects in the various departments of medicine. But if the medical man who is daily consulting medical literature has frequent occasions to consult a medical dictionary nowadays, how greatly at sea must be the doctor who took the honors of his class twenty-five years ago, but has read scarcely a page since in a medical work, if perchance he should happen to take up a medical journal of to-day and attempt to follow some writer in discussing the pathology of some disease.

But as the demand for medical dictionaries has recently greatly increased, it will be found that different varieties will be required. This fact is becoming developed already. We recently noticed a dictionary in two large volumes, prepared under the direction of Dr. Billings, of Washington. While it is a work of high order, and suited to the wants of

many, yet its large size and its price causes it not to meet the wants of others.

The work of Dr. Gould, which we have on our table, we feel sure, so soon as it becomes known, will be the most popular medical dictionary that has as yet been issued. It is of sufficient scope to take in everything needed in a dictionary by the medical student and general practitioner. While the definitions are compact and brief, yet they afford a clear and satisfactory understanding of the words and terms defined.

THE PULSE. By W. H. Broadbent; M. D., Fellow of the Royal College of Physicians, Senior Physician to, and Clinical Lecturer on Medicine in, the Medical School of St. Mary's Hospital, etc. Illustrated with Fifty Sphygmographic Tracings. Cloth. 16mo, pp. 312. Philadelphia: Lea Brothers & Co.; Cincinnati: R. Clarke & Co. Price, \$1 75.

This little book, the author states, is, for the most part, a reproduction of the Croonian Lectures on the Pulse, delivered before the College of Physicians in 1887, with some amplifications and additions—with the addition, in particular, of a chapter on the Sounds of the Heart, which must always be taken into consideration if the full significance of variations in the character of the pulse is to be estimated.

Some of the subjects in reference to the Pulse, treated in the work, are as follows: The Pulse, its Production and Significance; Mode of Feeling the Pulse; The Heart-sounds in Relation to the Pulse; Increased Frequency of the Pulse; Infrequent Pulse; Intermittent and Irregular Pulse; High Arterial Tension; The Pulse in Acute Disease; The Pulse in Valvular Disease of the Heart; The Pulse in Aneurism; The Pulse in Kidney Disease; Intermittent Albuminuria; The Pulse in Affections of the Nervous System.

It is not necessary for us to describe how essential it is to have a correct understanding of the import of the pulse in cases of disease. No physician can learn by his own experience exclusively the indications of the pulse. An instructor is required; and as an instructor the work of Dr. Broadbent is superior to any other of the kind with which we are acquainted. It should be in the hands of every medical student and practitioner of medicine.

SAUNDERS' QUESTION COMPENDS—ESSENTIALS OF FORENSIC MEDICINE, TOXICOLOGY AND HYGIENE. By C. E. Armond Semple, B. A., M. B., Cantab, Member of the Court of Examiners and late Senior Examiner in Arts at Apothecaries' Hall; Author of the "Essentials of Pathology," "Aids to Chemistry," etc. With One Hundred and Thirty Illustrations. Cloth. 12mo, pp. 196. Philadelphia: W. B. Saunders, 913 Walnut Street; Cincinnati: Alfred Warren. Price, \$1.00.

The *Lancet*, of London, speaking of these "Question Compends," says: "It is fortunate for the student that these books should be undertaken by competent hands—by men who, being themselves engaged in teaching, know where the subjects require most elucidation, and who, moreover, are careful to be accurate in their statements."

The work on our table is a condensation of the well-known large manuals of Tidy and Woodman, of Guy, of Taylor, and of Casper, into a comparatively small but not too meagre a space. It contains all the essential points of those works sufficiently elaborated to be understood and appreciated.

The methods of extracting the various poisons from the body have been specially dealt with, and the complex chemical processes are explained when such explanation seemed necessary.

The illustrations, which are numerous, are very well executed, and answer a useful purpose.

FOOD IN HEALTH AND DISEASE. By I. Burney Yeo, M. D., F. R. C. T., Professor of Clinical Therapeutics in King's College, London, and Physician to King's College Hospital. Cloth. 16mo, pp. 583. Philadelphia: Lea Brothers & Co.; Cincinnati: R. Clarke & Co. Price, \$2.00.

In writing this work on Food, the author states that his object has been to make it one of practical utility, and to render it, as far as possible, representative of the modern aspects of the subject on which it treats.

In the first part of the book he enters fully and in detail into the important subject of Army and Prison Dietaries, School Dietaries, and Feeding during the critical period of Infancy and Childhood. In connection with the first of these subjects he has been at pains to present as fully as pos-

sible the admirable system of feeding soldiers at home stations, so ably devised and carried out by Col. C. J. Burnett, a system which may serve as a model of wholesome, economical, and intelligent feeding.

There is certainly no knowledge to be compared in its importance and value to a physician as a knowledge of food in health and disease, and the method of its digestion and assimilation. In the young and growing animal food is essential for the growth and development of its organs. When these are complete, and growth is at an end, food is needed to maintain the integrity of the body structures, and to repair such waste as is involved in the exercise of their functions; while alike in the growing and mature body food is needed to supply the elements necessary for the maintenance of those chemical changes which are essential to the development of animal activities, such as muscular and nervous action, heat formation, nutrition, secretion, assimilation and reproduction. Food constituting, as it were, the pabulum for the maintenance of the structure of the body, and the fuel from whence it derives the support of its vital action in health and disease, has everything to do with the preservation of health and the restoration of it when it has been impaired.

The organisms of the two great kingdoms—animal and vegetable—are composed of seven elements, oxygen, nitrogen, carbon, etc., but only the vegetable organisms can obtain these from the soluble materials of the soil; in other words, can feed upon *inorganic* substances. Animal organisms can not do it; they are dependent on vegetable organisms to provide them with food that they can appropriate.

After the grass has obtained the inorganic elements from the soil, then the ox, by ingesting the grass and digesting it, can appropriate them for the building up and maintaining of its body. Or, to express it in the words of our author: "From this grass the ox is enabled to build up structures, and to perform functions of the same kind as those possessed by man himself." But while grass will afford the elements to an ox, still further elaboration seems necessary for man, as in the ripe seed of certain *species* of grass, as wheat, oats, etc.—the seeds of these species, as is well known, when fitly prepared by being ground into meal, form one of the most useful foods that man can obtain.

The work of Dr. Yeo is a scientific treatise on food, not a collection of formularies for the preparation of different dishes for the sick. He divides his subject into two parts—Food in Health, and Food in Disease. The first two chapters treat of the nature, origin and purpose of food, and the nutritious value and uses of the different classes of food. Other chapters discuss animal foods, vegetable foods, beverages, annexation of food—its digestion, assimilation and utilization, food in relation to age and condition, food in infancy and childhood, food at school, food in adult life, food in advanced age.

Eight chapters of the work are devoted to Food in Disease. Chapter IV. of this Part treats of diet in albuminuria; another chapter is devoted to the dietetic treatment of obesity; another to food in scrofula, consumption and chronic febrile conditions.

There are numerous dietary works, and works giving large collections of formularies for the preparation of various dishes, useful and not useful, but the work of Dr. Yeo is the only one that we can call to mind which is devoted exclusively to the scientific consideration of food. Works upon physiology discuss to a limited extent the action of food in maintaining the structure of the body and its activities, but they fall short in stating the facts found in this volume. We recommend the volume to the attention of medical students and physicians. A scientific knowledge which only affords correct information of the office of food will certainly contribute no little to the proper understanding and treatment of diseases.

THE PHYSICIAN'S LEISURE LIBRARY. Some Fallacies Concerning Syphilis. By E. L. Keyes, M.D., Consulting Surgeon to Bellevue, Charity, St. Elizabeth's and Skin and Cancer Hospitals of New York; Professor Genito-Urinary Surgery, Bellevue Hospital Medical College. Pp. 72. Paper. Detroit: George S. Davis. Price 25 cents.

Mr. G. S. Davis, of Detroit, believing that short, practical treatises, prepared by well-known authors, containing the gist of what they had to say regarding the treatment of diseases commonly met with, and of which they had made a special study, sold at a small price, would be welcomed by a majority of the profession, has arranged for the publi-

cation of such a series, calling it THE PHYSICIAN'S LEISURE LIBRARY.

In the little work before us of 72 pages, Dr. Keyes, who has obtained a high position as a syphiligraphist, discusses thirteen fallacies in regard to syphilis which he finds are entertained to greater or less extent—by the profession or the public, as the case may be—for the purpose of making a running commentary upon them, with a view to help to spread abroad what seem to him to him to be correct views.

We can mention only a few of the fallacies. Among them are the following:

Mercury cures syphilis.

The iodides are less harmful, and as effective, in the treatment of syphilis, as mercury.

Syphilis in the parent often shows itself as scrofula in the children.

There is a mild and virulent syphilis, *per se*.

Editorial.

GRADUATES OF HOMOEOPATHIC COLLEGES.—We copy the following from the *Times and Register*:

"It is well known that graduates of a homœopathic college are not eligible to appointments in the United States army or navy, though *The Hahnemanian* says that a charge of this kind is always met by an assertion from the authorities that no homœopathist has ever been refused, etc. The journal calls on some of the young men to make the adventure, to see what happens, and, if they are refused, let them report the indignity at the next meeting of the American Institute."

We heard it from some quarter, a long time ago, that candidates for appointment in the United States army and navy are not even asked whether they are graduates of medical colleges, much less are required to produce evidence that they are graduates. We have been informed that the candidates appear before a board of army or navy surgeons, as the case may be, and are examined in the various branches of medicine and surgery, and, afterwards, are reported upon with reference to their success in passing the examination. Those who have obtained a certain per cent. are eligible for appointment when their services are needed.

But their eligibility is exclusively on the ground of having passed a satisfactory examination before the examining board, and not at all on account of having graduated at this or that college or any college at all. Though a candidate may never have attended a single course of lectures at any medical college, yet, if he can pass the required examination he is eligible for an appointment as a surgeon in either the army or navy.

Candidates, no doubt, are always graduates of a medical college, for the reason that it would be almost impossible to become qualified to pass the required examination unless the parties had had all the advantages of collegiate instruction.

During the late war we knew a homœopathic physician who went to Washington and was there examined by a United States examining board, and received a commission as a surgeon, and served as such throughout the war.

STATE LIBERALITY.—The Legislature of California has passed a bill appropriating \$80,000 for the erection of a new medical college in San Francisco to form a part of the University of California.

TWINS, AND SIGNIFICANT INDICATIONS OF SENILE CEREBRAL DECAY.—Dr. C. P. Wagar, the editor of the *Toledo Medical and Surgical Journal*, recently announced that he, or rather his wife, had added to his family a boy and a girl—twins. We unite with our editorial brethren in heartily congratulating Dr. Wagar and his wife on account of the addition to his family, and hope they will continue, at short intervals, to increase their family by twos.

We regret that the announcement that a fellow editor's family has been made happy by the arrival of a brand new boy and girl has led to the disclosure that the cerebral tissue of the editor of the *Lancet and Clinic* is drying up by reason of, we presume, old age. This fact he makes manifest in a two-and-a-half column article which recently appeared in his journal on the Wagar Twins, in which he states that he is "not without hope of begetting twins in his family, although he is rounding the half-century mile-post."

What could have induced the editor of the *Lancet and Clinic* to have given utterance to such an expression but senile decay of the nervous ganglia of his cerebrum? He says he is *rounding the half-century mile-post*, so it will be

seen that he is close on to being a centenarian. Abraham, we know, begat a child when he was a hundred years old, but our editor confesses that he is entertaining hopes of *begetting twins*, when he is nearly of the same age.

But another evidence of senile decay of the nervous ganglia consists in his relating at full length, with all the details, the old story of Mrs. Toodles. In the loss of memory that follows upon senility, the editor evidently had forgotten that the account of Mrs. Toodles' buying a doorplate with the name of Thompson, with a "p," engraved in it, because she might have eventually a daughter born to her, who might marry a man named Thompson, with a "p" in his name, and then it would be so handy to have the doorplate in the house, originated with one of the writers of the Apocrypha and has come down to the present time through many ages. Yet, notwithstanding the great antiquity of the story, he presumed he was relating it for the first time. It is truly melancholy the havoc time makes with the nervous ganglia.

NEW GRADUATES IN MEDICINE.—We find in our exchanges reports of the following number of graduates by the medical colleges mentioned:

Kansas City Medical College,	Graduates,	16
Bellevue Hospital Medical College, N. Y.	"	144
Missouri Medical College,	"	101
St. Louis Medical College,	"	22
Homœopathic Medical College of Missouri,	"	25
New Jersey Med. and Surg. College (?)	"	3
Albany Medical College,	"	37
University of Buffalo,	"	53
University of City of New York,	"	160
Jefferson Medical College, Philadelphia,	"	220

TENTH INTERNATIONAL MEDICAL CONGRESS, BERLIN, 1890.—We copy the following from the weekly issue of the *Lancet*, of London, dated April 12:

"In accordance with a resolution of the Ninth Congress held at Washington, the Tenth International Medical Congress will be held this year at Berlin, opening on August 4th. In connection with this Congress there will be an International Medico-Scientific Exhibition, and those interested in the movement are cordially invited to forward exhibits bearing on subjects in connection with medicine,

surgery, and the cognate sciences, to Dr. O. Lassar, 19, Karlstrasse, Berlin, N.W., who will furnish information with regard to space, charges, and matters connected with placing the exhibits.

"The various sectional committees have now issued invitations to take part in the proceedings of the sections, and express a hope that they may have the satisfaction of welcoming large numbers of their colleagues to Berlin.

"Inquiries of a general character should be directed to Dr. O. Lassar, Secretary-General of the Congress. The official languages of all the meetings will be German, English and French. It will, however, be allowable to make use of other languages than the above for brief remarks, always provided that one of the members present is prepared to translate the gist of such remarks into one of the official languages. Those who take part in the Congress must pay a subscription of twenty marks, (one pound sterling, or five dollars) on being enrolled as members. For this sum they will receive a copy of the Transactions as soon as they appear. The enrollment will take place at the beginning of the Congress. Gentlemen may, however, be enrolled as members by sending the amount of the subscription to the treasurer, Dr. M. Bartels, Berlin, S.W., Leipzigerstr. 75, with their name, professional status, and residence appended."

EFFECTS OF VENEREAL DISEASE ON LONGEVITY.—Some life insurance companies reject the applications of all persons who have had syphilis at any period of their lives. Of course, such companies, or their medical examiners-in chief, take the ground that constitutional syphilis tends to shorten the duration of the lives of its victims. It is conceded by the medical profession, as is known, that when the syphilitic virus has once found a lodgment in the system, it can never be removed—that though it may lie dormant for years, yet at any time it may be called into activity. We have ourself *cured* cases of syphilis, which continued *cured* five, ten, and fifteen years—not a single symptom in the time being manifest—and then assumed great activity.

We have on our table, just issued, a little work by Dr. E. L. Keyes, Professor of Genito-Urinary Surgery and Syphilography, etc., in Bellevue Hospital Medical College entitled "Some Fallacies Concerning Syphilis," from which we quote the following:

"As for the mortality of the disease, Dr. Van Buren, my late associate, has often expressed to me the opinion that gonorrhea, indirectly, is more often the cause of death than is syphilis; and when we consider the far-reaching influence of gonorrhea, notably its effects upon the Fallopian tubes in the other sex, and its indirect effect upon the issue of those who come under its influence, and when we reflect that bladder and kidney disease often arise as a direct consequence of a gonorrhea which has resulted in stricture, we may appreciate why this conclusion is capable of being sustained upon rational grounds.

"But even allowing that such a statement is overdrawn, it is, I believe, certain that, considering its relative gravity, syphilis has, very often, little to do with terminating the life of the individual who possesses it. On the contrary, he generally lives out his term and dies of some disorder entirely independent of the one in question."

It is surprising to us that an eminent medical gentleman should not consider that syphilis, which poisons every tissue, gland, structure and cell of the body, has any effect upon longevity—that though it is admitted that it can not be cured, and is liable to manifest itself at any period of life after its activity has been brought in abeyance, yet that a person who has been affected with its blighting virus has as good a prospect for long life as others have whose blood has never been contaminated. We know that applications for life insurance are not unfrequently rejected for absurd and ridiculous reasons, yet we consider the fact that a party has had constitutional syphilis at some time is a legitimate reason for rejecting his application.

While we are upon the subject of life insurance we will observe that it has assumed such an importance, is now considered such a necessity, that it is time that the law should come in and take some action in defining the qualifications of parties for life insurance. At the present time the acceptance or rejection of an applicant rests largely upon the whim of the chief medical examiner of the company to which application has been made; and the rejection by one company, however absurd the alleged cause may be, will generally prevent one's acceptance in all other companies, and, therefore, if not based on valid reasons, oftentimes entails a great injury. If all medical examiners who finally passed upon the application papers of those desiring to insure their lives, were men of learning who had qualified

themselves for their positions by long study, and had become versed in all the conditions affecting longevity, and possessed such mental faculties as would enable them to form correct processes of reasoning and to draw accurate conclusions, the acceptance or rejection of applicants for life insurance might be left entirely to the companies without apprehension of any injury being done to any one. Or if the rejection of an applicant by one company, however invalid the reasons were, did not jeopardize at all his chances of acceptance in other companies, we would consider that there would be no cause at all for legal interference. But the fact is, that sometimes the medical examiner who passes final judgment upon the applications of those seeking the benefits of life insurance is a person very unqualified for the duty, both as regards his acquirements and mental traits, and the result is that through this one man's incompetency a party is prevented from getting his life insured in any life insurance company throughout the whole country. Should such things be permitted to be? We think not.

The laws of every State define who are qualified to demand lodgings in a hotel, if they are willing to pay the price asked—what persons have a right to demand transportation on railroads, steamboats, stage coaches, etc. They describe the qualifications that must be possessed to obtain a berth in a sleeping-car, etc.—to enjoy the benefits of a public library, and the public schools. This being so, certainly the law can define the qualifications which entitle a man to have his life insured; and can compel any company to accept his risk if he can substantiate his claim that he possesses these qualifications. But more on the subject at another time.

FALLACIES HELD CONCERNING SYPHILIS.—Dr. Keyes, of Bellevue Hospital Medical College, is the author of a small work, just issued in the *Physician's Leisure Library Series*, entitled *Fallacies Concerning Syphilis*, which we feel sure will be read with interest.

The *fallacies*, as Dr. Keyes terms them, which he discusses are thirteen in number—all of them being views more or less prevalent in the profession, and held as true by many. Some of them are so generally accepted by medical men, and have been believed for so long a time without contradiction, that we are of the opinion it will require a great deal of effort to overturn the faith in them. One of

these is, "Syphilis in the parent often shows itself as scrofula in the children."

Now, we remember well that when we were sitting on the benches of the lecture rooms, when we were attending our first course of lectures, that it was taught by every chair of the college (except, may be, the anatomical and chemical chairs, and we are not sure but that even they taught it) that syphilis, when it had affected the constitution, not being active, was transmitted oftentimes from parent to child in the form of scrofula; that sometimes it imparted to offspring a disposition to consumption; that not unfrequently the taint would be manifested in children by a degenerate condition of the nervous system, etc. It was held generally at that time, as is the case at the present time, that when syphilis had passed to the secondary stage it was never cured (eradicated from the system), although by treatment its activity might be checked, and when thus checked it might continue in a dormant condition for many years without a symptom of it being manifest.

It is the general belief, in the profession, we believe, that when syphilis is active in either parent, in its secondary or tertiary form, it is transmitted as syphilis, but when *dormant*, not active, it is transmitted as scrofula, or is inherited by offspring in the form of some constitutional taint of the nervous system or of the other tissues. But Dr. Keyes says that syphilis in the parent does *not* show itself as scrofula in the children, but as syphilis. "Syphilis in the parent," he asserts, "if transmitted at all, is handed down as syphilis, and as nothing else."

Dr. Keyes illustrates his view with the case of a mother having acute syphilis. "Such a mother," he says, "very often aborts several times successively," (nature resisting with all her might against adding such contaminated beings to the human family) "then is delivered of a dead child, then of a child apparently healthy, which, after a few weeks, shows up its syphilis by snuffles and a variety of eruptions; gets jaundiced, has an aged aspect, and a cracked quality in its vocal sounds, and shortly dies—very likely in convulsions. The next following child dies also, at some later period of its existence. Finally a child is born apparently healthy, but it has bone disease, probably rickets, grows up with notched central incisor teeth in the upper jaw, has the syphilitic countenance, and later interstitial keratitis with some ulcers in its mouth, and perhaps gets gummatous disease of

the bones of the nose during adolescence, deafness, or some more serious expression of tertiary syphilitic disease, which may or may not terminate its existence."

But all this, he asserts, is syphilis, and not scrofula—"the symptoms, when they yield at all, do so to the same treatment that controls syphilitic manipulations in the adult." We agree with him. In cases of acute syphilis the inheritance is syphilis and not scrofula.

We have no doubt but that in many instances, when one of the male sex has had constitutional syphilis, but has been *cured* by proper treatment—that is, the disease rendered dormant,—made inactive—and afterward marries a healthy woman, if children should be begotten while the disease continues inactive, some or all of them may grow up and live to old age without the manifestation at any time of a symptom of scrofula or any other constitutional taint. The rule is that consumption is hereditary, but many consumptive fathers beget healthy children, while a robust father and a robust mother have brought into existence none other than consumptive offspring. We have seen this exemplified a number of times. We have thought that, in such cases, it might be that, on one or the other side, if not on both sides, consumption had existed two or three generations back, and, consequently, that the disease had been transmitted through two or three generations in a dormant condition, and then became excited into activity. It is certain that all the conditions of heredity are not yet fully understood. If syphilis and consumption should prove to be bacterial diseases, as is believed by many, the microscope, in course of time, will undoubtedly develop conditions attending the transmission of diseases that are yet unknown.

Dr. Keyes has had a very extensive observation of syphilitic cases—several hundred, no doubt, where the ordinary practitioner has had one—but in all he alludes to in illustration, we can not see that he is able to exhibit the slightest evidence to prove that the belief is a fallacy that "syphilis in the parent often shows itself as scrofula in the children."

We heartily agree with Dr. Keyes that it is a fallacy to suppose that the treatment of syphilis consists only in the use of mercury and the iodides. This view is his Fallacy No. XI.

The Doctor shows that in treating a case of syphilis the patient must be studied and treated as well as the disease.

Diathetic influences have to be considered, his habits, state of his blood, the condition of his digestive machinery, and many other circumstances connected with the patient.

Mercury and the iodides given in one form may entirely fail; when exhibited in another form most brilliant results will follow. Some patients will grow worse under iodide of potassium, and improve when the sodium salt is substituted, etc.

In discussing Fallacy No. X, the Doctor asserts, and we coincide with him, "that mercury properly used, even over a period of many years, is not at all harmful, and that no deleterious immediate or after effects can be honestly ascribed to it."

Dr. Keyes shows that syphilis is contracted in many other ways than by sexual intercourse with an unclean person. He says that "kissing is perhaps the most fruitful source of the non-sexual spread of syphilis in the community, and its indulgence, especially in any excessive or protracted manner, should be forbidden to patients with mucous patches upon the tongue or lips." He mentions meeting with a modest young girl brought to the hospital covered with a syphilitic roseola, who had evidently been inoculated upon the arm, which had been scratched by a pin, by nursing a child that was found to have a number of mucous patches in its anus. The parents were poor, the baby did not wear diapers, and the girl habitually carried it upon her bare arms.

We will end our article by saying that while syphilis in the phenomena which it presents is an exceedingly interesting affection for study, more so, probably, than any other which afflicts men, but certainly it is the most hellish of all diseases, its origin having been in the vilest of vices, and its effects reaching to the third and fourth generation. It was sent among the human race probably for the destruction of those whose vicious propensities cause them to make brutes of themselves.

LIFE INSURANCE.—We have received and have on our table two tracts upon life insurance, one by a physician of Cincinnati, and the other by a Presbyterian minister. The physician is Dr. William Judkins, and the minister, Rev. Alexander B. Morey, pastor of the Fifth Presbyterian Church, of Cincinnati. Dr. Judkins takes as a text for his remarks an editorial which appeared in the New York *Med-*

ical Record, November 23, 1889, entitled "The Physician's Family and the Provisions that He Leaves for It." Rev. Morey takes his text from the Bible, Leviticus xxvii. 19: "And it shall be assured to him."

Dr. Schrady, the editor of the *Medical Record*, like the man of sense and learning that he is, expresses himself strongly in the editorial, which forms the text of Dr. Judkins' discussion on life insurance, in favor of life insurance, but it is surprising to us that he advises physicians to connect themselves with those most unreliable companies, assessment companies—companies which have always failed in a few years after their organization. Like the house, spoken of in the New Testament, which was built upon the sands and fell, these, too, must fall, for they have, and can have, no reliable foundations. Their foundations are the agreements of a collection of individuals—agreements which can in no wise be enforced when the fickle men who have made them have repented of them. Besides, they are always poorly guarded against the admission of improper persons.

But as our readers will, no doubt, be pleased to have an opportunity to see and read Dr. Schrady's article, we will quote it in full before making further remarks:

"It is a well-known fact, and as sad as it is notorious, that physicians, even those accounted successful during life, often leave very little behind them for the support of their families. They may have enjoyed a good income, but their expenses were proportionately heavy, and when death overtook them they were found to have laid little by for the future.

"We do not propose to draw a moral from this, nor preach the necessity for economy. 'As uneconomical as a doctor,' is an expression that has become almost proverbial, and preaching will not promote thrift where thrift is impossible. Of course, we do not mean to say that all doctors are improvident, but merely that the lack of a prudent oversight is an all too common failing among the members of our profession. In many cases, moreover, it is impossible to get ahead, the daily income sufficing only to meet the daily expenses, and so, when sickness or death comes, and the income ceases, there is nothing left.

"It is for this reason that physicians' mutual benefit associations have been formed in many of our cities, and we think it is the duty of every one to join an association of this kind if he has the opportunity. We say every one, for

the larger the membership of such an association the more benefit is derived from it by each individual member. It is not only the needy who should join it, but the prosperous as well. No one can tell when reverses may come, and it is only the part of a wise man to provide for any possible contingencies.

"The same argument will apply to life insurance. If a man has his life insured when he is young, the expense is small, and he will have the satisfaction of knowing that his wife and children will not be left destitute, even if he has been unable to lay anything by for their support. Let him first of all join the Physicians' Mutual Benefit Association, if there is one in the community in which he lives, and then let him put aside what he can every year in the shape of a premium on a life insurance policy, and he will not regret it.

"If every one of our readers would but follow this advice, which we assure them is sound, there would be a saving of much suffering to the widows and young children of physicians who have died before their time. The inconvenience of acting upon this advice now will be very slight, but the future misery that will be averted by so doing is great."

Dr. Judkins, in discussing Dr. Schrady's editorial, expatiates at some length upon the necessity of physicians providing for their families while living, by insuring their lives. "The practice of medicine to-day," he says, "with its many specialties and the numerous free dispensaries and hospitals, cuts deeply into the annual income, of which, after taking out the 'family expenses,' schooling, horse-keep, etc., there is little left to put away." Yes, it is, indeed, true, that very large numbers of the medical profession find it difficult by their practice to make a living for their families, or, if doing that, to lay up a spare dollar in the way of accumulating a sufficiency for their support when they themselves can no longer earn it. This is made evident every day by what is witnessed by observation.

Doctors are often charged with employing unfair means toward one another in order to obtain business. The charge, no doubt, is sometimes true. A degree of selfishness exists in every one; and the passion of self-preservation and the preservation of those near to us is the strongest passion implanted in man. Since, then, there is such a hard struggle to live and lay up a few dollars to sustain the respecta-

bility of their families when they can no longer labor for them, should it be any wonder that doctors now and then would be forgetful of proprieties to secure a paying family? But we feel sure that the morals of the members of the medical profession will compare favorably with the morals of those of other professions. But if all physicians who are not possessors of wealth by inheritance or marriage, should insure their lives, and thus remove from their minds the terrible anxiety in regard to the support of their families in case they should "decide to die" at any time, as Dr. Judkins facetiously expresses it, a very strong incentive to selfishness would be removed, and there would, no doubt, follow a laudable disposition to deal justly by their brethren. But we will hasten on.

Dr. Judkins expresses himself as not having much confidence in the *Mutual Life Assessment Companies*. He favors "old-line insurance, non-forfeitable, payable at death." We have had personal experience with assessment companies. About twelve years ago such a company was organized in Louisville, Ky., exclusively for the benefit of physicians and their families. An agent was sent to Cincinnati, who got a very large number of physicians here to insure in the company. An initiation fee was charged for membership. After the payment of this the member was *entitled* to be assessed, according to his age, from \$1.50 to \$4.00, on notification of the decease of any member, the heirs of each member to receive on his decease \$2,000. For a number of months the notifications of assessment came far apart; but with about the beginning of the second year they were received at the rate of two or three a week, with a prospect of such a rapid increase as to make one feel that at the end of the third year his assessments would amount to nearly the sum his heirs would receive in case he should, about that time, "decide to die."

We would advise all physicians to keep out of *Mutual Life Assessment Companies*. We are surprised that such an intelligent man as Dr. Schrady, of the New York *Medical Record*, should advise insuring in them.

There are other points set forth in Dr. Judkins' tract, but we have not space at this time to notice them.

In a future issue of the *MEDICAL News* we intend to review briefly the tract by the Rev. Alexander B. Morey, and discuss still further the tract of Dr. Judkins.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 269.
Old Series.

MAY, 1890.

{ VOL. XIX. No. 5.
New Series.

Original Contributions.

Treatment of Local and General Peritonitis.

BY W. E. B. DAVIS, M.D., BIRMINGHAM, ALA.

(Read before the Alabama Medical Association.)

The above is the title of a paper read at the recent meeting of the Alabama Medical Association, by Dr. W. E. B. Davis, of Birmingham.

From a study of the experiments of Pawlowsky, Grawitz, Wegner and others, the following points have been pretty well settled:

First. Simple peritonitis, when caused by a sufficient quantity of chemical irritant, will produce death by the extent of the inflammation.

Second. Simple inflammation may terminate in septic peritonitis, by producing a weakened condition of the walls of the intestines, which permit the passage of septic germs from the intestinal canal into the peritoneal cavity.

Third. While pathological germs in a small quantity may be absorbed by the healthy peritoneum, without producing a peritonitis, the same quantity combined with a chemical irritant may produce a violent inflammation—the irritant having prevented the absorption of the germs and caused the exudation of a nutrient fluid for their multiplication.

Fourth. Large quantities of septic fluids and microbes always produce suppurative peritonitis; yet a small quantity of either may be absorbed and destroyed, unless the peritoneum has been weakened by antecedent pathological changes.

Fifth. A septic fluid may gravitate into dependent parts of the peritoneum, and become shut up either by plastic inflammation, or by a coil of intestine, and thus be pre-

vented from producing diffuse peritonitis, but after a time this may rupture and produce death from general peritonitis.

Sixth. The germs of septic peritonitis will be found in the kidneys and other organs of the body, and in greater quantities, according to the extent and duration of the inflammation.

Seventh. The condition of the peritoneum, and the nature and quantity of the septic product will determine the rapidity of the inflammation, which usually ends in from forty-eight hours to six days, but death may be produced from shock in a few hours. Tubercular inflammation is always slow in its progress.

From a consideration of the foregoing principles, he says the following indications for treatment must be arrived at:

1. Promote absorption of the inflammatory products of simple peritonitis as rapidly as possible, and thus relieve the inflammation and prevent the possibility of septic peritonitis.

2. In the early stages of peritonitis, whether simple or septic, where the cause can not be determined, hasten the absorption of inflammatory products, etc., with purgatives.

3. When medical treatment fails to give relief, septic fluids should be removed by operative procedure.

4. In localized peritonitis—with circumscribed pus formation—the pus should be removed and the abscess cavity drained.

5. In acute septic peritonitis, operative procedure must be adopted early, or there will be no chance of recovery offered by the operation, as the inflammation will become more extensive the longer it continues, and, too, there will be so great a quantity of septic germs absorbed into the system, that death will result from toxæmia, even though the local inflammation should be remedied by a late operation.

He quotes from Habershon and others, and states that it has been demonstrated, that in the large majority of cases, peritonitis is a symptom of some well-recognized lesion of the abdominal or pelvic viscera, and that the only rational treatment must be based upon this conception of the disease. Peritonitis is not a "disease distinct," as taught by Bichat, and upon which teaching the treatment of Alonzo Clark gained such great popularity. The "opium splint" is irrational, for it not only locks up the products of inflammation,

but as shown by Wylie, Johnson, Baldy and others, and by his own experience, subjects the patient to one of the greatest dangers of the disease, viz.: obstruction of the bowels from adhesions.

In case of perforation of the bowel, opium is indicated to relieve pain and shock, and to prevent peristalsis, and further escape of the intestinal contents into the peritoneal cavity. Again, morphine hypodermically may be used, with benefit, in some cases when there is persistent and uncontrollable vomiting; but at the same time, calomel in small and frequently repeated doses, may be dropped on the tongue and the bowels induced to act. There are many cases in which it is absolutely necessary to give a hypodermic injection for pain, but this should never be given in such doses as recommended by the advocates of the opium treatment, and should not be administered at all unless the patient's condition is being made more grave by the shock provoked from pain.

The first two indications for treatment are best met by free purgation, as taught by Tait and others, and the majority of those who have adopted this plan select the magnesium salts, as they produce very large watery stools. When the stomach rejects salts, calomel may be used.

He refers to a large number of cases treated by him in the most satisfactory manner by purgation—and among them several cases of threatened peritonitis, after laparotomies. During the past year he has not waited for symptoms of peritonitis after a laparotomy, but begins the use of small doses of salts, and if not retained, of small doses of calomel, a few hours after the patient gets from under the influence of the anaesthetic, and aids the purgative by the administration of enemas of milk and whisky every third hour, which relieve thirst and stimulate and nourish the patient, if retained.

In these cases he has had to give an occasional hypodermic of morphine, but this did not prevent the bowels acting. He has had to depend on calomel oftener than salts, as it was not rejected. He reports cases illustrating how purgative treatment aids in diagnosis, and others to show how all symptoms may be masked by opium, and an operation delayed too long—and concludes by stating that it is very important not to resort to the free use of morphine, unless an operation has already been decided on, and this administered to relieve pain and lessen shock.

After cases of abortion, or delivery at full term, in addition to large doses of ergot, to produce rapid involution of the uterus, he has his patients, within twelve or sixteen hours, take a decided dose of salts to prevent peritonitis.

He reports a number of cases of perityphilitis, and advocates early operative interference. Since the cæcum and appendix are always completely invested with peritoneum, as demonstrated by Bull, the abscess of the appendix must be intra-peritoneal at the beginning, as has been shown by the experience of McBurney, Weir, Wylie, and others.

He agrees with Wylie that should the symptoms of local peritonitis, in the region of the cæcum, not begin to improve by the fourth or fifth day from saline treatment and local applications over the seat of the inflammation, an incision should be made down through the muscles, and the peritoneum dissected up, until a place is found where the abscess is attached, and then opened. While the operation would be easier if delayed, the danger of the abscess rupturing and producing acute septic peritonitis must be borne in mind, and hence the increased difficulty in doing the operation is more than compensated for in the risk saved the patient.

Cases are reported to show that a negative result with the hypodermic needle should never cause a moment's delay in operating. He operates just as promptly when he can find no pus.

He endorses the views of those who advocate the removal of the appendix in frequently-repeated attacks of appendicitis, for the same reason that he would remove the tubes and ovaries for recurring attacks of pelvic peritonitis—when they are the cause of the inflammation.

In acute septic peritonitis, as met with in child-bed fever, or after perforation of the bowels, or from the emptying of the contents of an abscess into the cavity, or after operative procedures, or accidental traumatism, such as gun-shot wounds, stabs, etc., nothing short of a laparotomy can afford any chance of recovery—and this will not offer much prospect unless done very early.

He quotes the experiments of Pawlowsky, and recites his own experiments on animals, to demonstrate how rapidly septic peritonitis may be developed and produce death. He also reports a number of cases of gun-shot injuries and stabs of the intestines in which he has seen violent attacks of peritonitis developed in a few hours, and in which the symptoms

before operation did not indicate its development. Hence, when the abdominal cavity has been entered, it should be opened and explored immediately. To wait for symptoms is to wait too long. Give morphine to relieve pain and shocks, and operate, even though the patient should feel perfectly well after the relief thus afforded.

In cases of perforation of the appendix, etc., the operation should be done at once—unless the patient is almost pulseless—as by so doing the shock will be relieved. The same rule will hold in cases of ruptured abscesses. In cases of perforation in typhoid fever, the condition of the patient before the accident must be taken into consideration, as pointed out by Mears; but as this is a fatal accident, unless it can be remedied, by operative measures, this procedure should not be condemned without having been tried in a larger number of cases.

After a review of the open plan of treatment, as suggested by Dr. B. E. Hadra,—which he condemns—he recommends the following method—which should be adopted in all cases of *acute general suppurative peritonitis*, and which will allow of the complete exposure of the abdominal cavity, the removal of the cause of inflammation, and assist in restoring the functions of the intestines:

The abdomen is opened in the median line; the cause, if found, removed; the cavity thoroughly douched with hot water; all adhesions broken up, and, if tympanites is not marked, drainage tubes are introduced, through which the cavity may be washed out, as indications require. If the cause should be found in the region of the cæcum, the drainage tubes should be introduced through a second incision in the right iliac region.

In those cases in which tympanites is marked, causing pressure on all the abdominal organs, and thus creating much constitutional trouble, it will require special attention, and upon this point he lays great stress; for this condition is a dangerous one of itself. Not only does the weakened intestinal wall permit of the continued passage of septic germs into the peritoneal cavity and afford constant infection, but it must be remembered that the bowel can not be replaced without great pressure and consequent traumatism, which will often kill in a few hours from shock thus induced. In advanced cases of peritonitis it must also be remembered that the walls of the intestines are rendered inactive by inflammation, and the power of contraction can

not be restored until the inflammation is relieved ; and hence, the bowel will continue tympanitic and the exchange of septic germs kept up, unless this condition is remedied. Dupaul punctured the intestine with a fine hollow needle in cases of tympanites, with dangerous pressure symptoms, and this has been recommended by the leading writers up to this time ; even Senn refers to this as a procedure which may be resorted to. This has been tried by the author a number of times, and he has never been able to see an appreciable decrease in the tympanites, and he argues that it is not reasonable to suppose that a paralyzed bowel could expel any quantity of gas through a needle. He has also practiced making incisions into the bowel, and by pressure attempted to expel the gas, but this does not prove satisfactory. He considers the best method of relieving a distended, paralyzed gut, full of poisonous gas, is to fill it with hot water, as this will not only free it of tympanites, but in getting rid of the gas and feces, etc., prevents infection.

Hence, in extreme cases, he believes an opening should be made in the lower part of the ileum, and the bowel thoroughly irrigated. An artificial anus should be formed and the bowel irrigated through a soft tube, as necessary to prevent tympanites and adhesions. Purgatives can have but little effect on the bowel, in fully developed septic peritonitis, when nearly all the coats are inflamed ; so we must reach it mechanically. With this plan the colon can be washed through a rectal tube, the small intestines irrigated as required through the artificial anus, and the peritoneal cavity drained and douched.

This method meets all the indications for treatment, and is the one which should be adopted in all cases where marked tympanites is present.

The Treatment of Intestinal Obstruction.

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It is important in discussing the questions connected with intestinal obstruction, to know exactly what we mean by the term. Dr. R. Harvey Reed, of Mansfield, Ohio, in an

article recently published in the *Journal of the American Medical Association*, divides the subject into veracious obstruction and pseudo-obstruction, the latter including those cases in which, from any cause, there result a paralytic condition of the intestine, which disables that organ and produces symptoms similar to those occasioned by hernia or volvulus. To class together in this way conditions so entirely dissimilar, as, for instance, an acute peritonitis and an intussusception, is warranted by the fact that the symptoms of many such cases are so obscure as to defy exact diagnosis. Whether the conclusions of Dr. Reed, that they all demand laparotomy and will die without it, are also warranted by the facts of the case, is another matter. It becomes, however, impossible, from the inherent difficulties of diagnosis, to discuss the question of obstruction without also discussing that of pseudo-obstruction, but as the full consideration of all the topics included in these conditions would occupy more time than the Society has at its disposal, I shall have to content myself with stating, as nearly as I can in outline, the principles which guide the surgeons of to-day in the treatment of these cases.

We must, first of all, consider the variety of conditions which present themselves under this head. They are, acute and chronic inflammations of the bowels, perforations and their consequences, ulcerations caused by tubercle, syphilis, typhoid fever and other agencies, pelvic inflammations, paralyses, displacements of the uterus, spinal deformities, cicatricial contractions and bands of false membrane, abscesses, tumors and aneurisms which press upon the bowels, cancers and tumors in the wall of the gut, intussusceptions, volvulus and bending of the intestine, diverticula due to anomalies of development which become entangled with the bowel; herniae, through the various abdominal walls or through rents in the mesentery, accumulations of faeces, collections of worms, intestinal concretions, and foreign bodies.

A glance at this formidable list of the causes of obstruction shows the absurdity of attempting to establish any routine of treatment which must be applicable to all cases.

In the diagnosis of these conditions the history of the case must always be of prime importance. The occurrence of great and localized abdominal pain, with subsequent general peritonitis, and a tendency to collapse during the course of a typhoid fever, would naturally be diagnosticated as a perforation caused by an iliac ulcer. In other than typhoid

cases, the same symptoms in the iliac fossa, perhaps a little less intense, would be referred to perforation of the vermiform appendix. In persons who had previously suffered from peritonitis or upon whom laparotomy had been performed, recurring attacks of obstruction would be interpreted as due to false membranes or adhesions.

The patient study of the previous maladies of the patient is, therefore, never to be neglected in cases which are at all obscure.

In considering these cases, we may best divide them into acute and chronic, and may, perhaps, study them to the best advantage by giving each group a separate consideration.

First of all these, cancers, tumors and chronic ulcers may occur anywhere in the intestinal tract, either within the gut or in its neighborhood.

If the pylorus is the seat of the obstruction, there will be vomiting of partly digested food, mixed sometimes with blood or pus, and dilatation of the stomach, which may be readily mapped out on the abdomen by the injection through the stomach pump of air or water. If the duodenum is affected at or beyond the orifice of the gall duct, jaundice may supervene and the vomited matter may contain bile. Obstruction of the small intestines by these diseases causes bloating, abdominal distress, constipation, and finally faecal vomiting. In these cases, the onset of symptoms is gradual, but the final culmination of the trouble may be very acute, owing to sudden complications, such as inflammation at the seat of disease. In the large intestine obstruction from cancer or ulcer rarely causes faecal vomiting. Instead of that, constipation alternates with diarrhoea, great masses of faeces accumulate above the seat of the disorder, and their absorption finally poisons the patient and hastens the end. In the diagnosis of these conditions, the presence of a tumor, which can be detected through the abdominal wall, or through the rectum or vagina, is really the only positive symptom. Where this symptom fails, however, the surgeon may enlarge his opportunities of diagnosis by operative means. Of these there are two. He may cut down to the peritoneum, as near the seat of the disease as possible, and then explore the abdomen underneath through this thin membrane, or he may secondly perform an explorative laparotomy. When the diagnosis is made, then the surgeon may resort to radical measures, such as the excision of the dis-

eased parts of the intestine, or to palliative means. Whatever may be thought of radical measures in malignant diseases, there can not be much doubt that it is the duty of the surgeon to operate if the cause of the obstruction is a thickening and contraction of the walls of the intestine by simple ulcers and their results. In obstructions of the pylorus, it is said we have a means of diagnosis of simple from cancerous ulcer in the chemical examination of the gastric juice. If the hydrochloric acid, which is one of the normal ingredients of the gastric juice, is deficient in quantity or absent, the trouble is cancer; if in normal quantity, it is simply ulcer. In other portions of the gut there is no other way to judge except by carefully examining the history of the case. The palliative means which may be used in the treatment of these cases consist in the formation of new channels through which the food or faeces may escape. The stomach may be connected with the small intestine by a communicating orifice—or the intestine may be joined together—or a preternatural anus may be established in either groin or in the lumbar region. Koenig has of late years reported many cases of cancer of the rectum, where he has relieved the patient vastly and prolonged his life by dividing the large intestine in the left iliac fossa, closing the lower end permanently by turning in the serous coats and causing them to adhere, and then making an artificial anus by sewing the upper end into the abdominal wound. The cancer of the colon higher up the right iliac fossa could be chosen instead of the left. The great advantage of this procedure is that the cancerous ulcer is spared the constant irritation caused by the passage of faecal matter over its surface. This procedure might be of great service also in intractable contractions of the rectum from syphilis, although in some of these cases an artificial anus without obliteration of the lower part of the rectum might be preferable. Omitting those forms of obstruction which depend upon the uterine displacement and spinal deformities, I will next consider those which depend upon the presence of foreign bodies, including faeces. The accumulation of faeces alone, when of long standing and associated with great atony of the intestine, may eventually give rise to symptoms of obstruction. This never occurs in the small intestine, but frequently in the large. The history of such cases shows that there has either been an intractable constipation or a constipation which has alternated with diarrhoea. In time a tumor grows in the abdomen which yields to the

touch the irregular doughy feel of hardened faeces. It may be that the mass can be felt through the rectum, but frequently the trouble lies higher up and beyond the reach of the fingers. Large and frequently repeated enemata combined with the free use of cathartics may bring away the mass and clear up the diagnosis. Frequently, however, when the tumor is in reality an accumulation of faeces, the real trouble is the existence of a stricture of some kind which prevents the faeces from descending, and while even if sufficiently patient to permit of evacuations by artificial means, nevertheless form a permanent obstacle to a complete cure. The faecal accumulation may then mask the real and formidable trouble behind it. Intestinal concretions made up of calcareous or faecal matters which have become pressed and rounded into an organic whole, or of numerous biliary calculi, or of masses of hair, or finally of indigestible substances, such as cherry pits, which have lodged somewhere in the intestine.

I know of one case in the practice of the late Dr. Pitcher, in which obstruction caused death, and in which a post-mortem examination revealed a large intestinal concretion at the end of the ilium which completely obstructed the ileo-caecal valve. Fischer, of Breslau, reports three such cases, and Hahn, of Berlin, states that they are not uncommon with carpenters, who drink the spirits used for polishing, containing gum shellac, which hardens in the intestine into concretions of various forms and sizes.

In one case recently reported from Munich by Stepp, a child, who had been given medicine for worms, was suddenly seized with symptoms of obstruction. Death followed at the end of fourteen hours, and the lower part of the ileum was found to be completely obstructed by a great quantity of round worms which had become entangled together in an inextricable mass. The symptoms of obstruction from foreign bodies must be very obscure in all cases excepting those in which the seat of the trouble is the rectum. The diagnosis from other forms of obstruction can be only conjectural. In the history of obstructions of the intestines it is remarkable how many are caused by diverticula or pouches of the intestine, which become entangled with the gut. On looking over the journals of 1888 in my office, I have found no less than three cases recorded in which death followed obstruction from this cause. These diverticula are caused by anomalies in development. Meckel's diverticu-

lum, which is the unobliterated remains of the vitelline duct, and which connects with the ileum near its lower end, is usually at fault. Their diagnosis is not possible without laparotomy, and even then the surgeon may become completely bewildered by the complicated snarl which is presented by the involved intestine and the diverticulum with which it has become entangled. The diagnosis of herniæ is more easy and the principles are better established which govern their treatment than those which govern the treatment of most obstructions. Herniæ through rents in the mesentery, however, defy diagnosis except by means of abdominal section.

Volvulus and bending have no distinct symptoms to distinguish them from other causes of acute obstruction. Intussusception, on the contrary, may cause a well defined tumor which can be easily felt through the abdominal wall in the early stage of the disorder. The sudden occurrence of a tumor coincident with great local distress, vomiting, tenesmus and sometimes collapse, render intussusception probable. The most difficult cases, however, to diagnose from true obstruction, are those caused by paralysis of inflammatory conditions. In these cases the onset of pain and vomiting may be as sudden as in true obstruction. The bowels become quickly bloated and obstinately constipated. The pain is frequently local at first, to become subsequently generalized. In uncomplicated inflammations, it is true, the vomiting is rarely faecal in character, but, on the other hand, in the early stages of true obstruction, it is not faecal, and in some cases it may never become so. Where perforation causes the inflammation, the escape of gas into the abdominal cavity may produce a diagnostic symptom, that, namely, of the complete disappearance of the liver dullness. This symptom may fail, however, where adhesions exist which shut the orifice in the bowel off from the general abdominal cavity. In general, the symptoms of acute obstruction are strikingly like those of acute inflammation, and the diagnostic powers of the surgeon are in many cases tested to the utmost. Where a sudden violent pain in the bowels ushers in vomiting and constipation, and where the pain remains localized for many hours, we may suspect obstruction. If the vomiting becomes faecal, we may feel nearly sure of it. If, on the contrary, the vomiting continues, but takes on more the character of coffee grounds, we may more probably diagnosticate inflammation. It is the extreme uncer-

tainty of diagnosis in many cases which holds the hand of the surgeon and prevents him from operating. It is well for the profession to note that, unlike most disorders in which the diagnosis is cleared up by time, that of intestinal obstruction becomes often more obscure as the hours roll on. The reason of this is, that when obstruction is just begun, the trouble is localized, the abdomen is soft and compressible, and any tumor can be felt without very much difficulty. As time goes on, however, the intestines above the seat of trouble become enormously distended so as to hide the tumor if any exist, and to present a picture identical with that of inflammation.

Paralysis.—In the early stages of perforation there may be loss of liver dullness. In the later stages, the bowels in the neighborhood of the perforation may become agglutinated and prevent the further escape of gas. That which first escaped may become absorbed and the liver dullness may re-appear.

Now, as regards the treatment of all these various disorders, there is only one class of them about which we may say positively that the rule of surgery should be to operate. This class comprises all those cases in which there is a sudden perforation with the escape of the intestinal contents into the abdominal cavity. Whatever the cause of the perforation, whether the ulcer of typhoid fever, the simple ulcer of the stomach, a gun-shot wound, or the inflammation and gangrene following intussusception, the case in the vast majority of instances permits no hope except through laparotomy. It by no means follows, however, that the usual treatment of surgery after laparotomy, namely, the search for and occlusion of the perforation, is the one necessary or proper in many such cases. The search for the exact seat of the trouble in the bowel may kill a patient, already in collapse from the accident or low with typhoid fever. The object of the laparotomy should be the cleansing of the abdominal cavity, the prevention of the further escape of the contents of the intestine into the peritoneal sac, and the thorough drainage of the parts. Now, while the repair of the impaired gut, whether by resection or suture, is the ideal procedure, where the strength of the patient does not warrant this often long and exhausting operation, the surgeon may resort to another method of treatment. He may open the abdominal cavity in one or two places, wash it thoroughly out, put large drainage tubes in at the supposed seat of the

trouble, and rely upon the subsequent adhesive inflammation to wall in the perforated bowel and finally close the perforation itself; or varying this procedure he might, after laparotomy and thorough irrigation of the abdominal cavity, stuff a quantity of iodoform gauze against the orifice which has caused the trouble and thus occlude it for a few hours, until the seat of the cavity has been protected from infection. There is no reason why pressure should not prevent extravasation from an intestine as well as from a vein, and the time saved by such a procedure, instead of that hitherto adopted, might be of vital importance to the patient. In that form of pseudo-obstruction caused by peritonitis, it is difficult to see any good to be accomplished by laparotomy, unless pus had actually formed in the peritoneal cavity. In adhesive peritonitis, the surgeon could hardly hope to be able to cleanse the intestine so thoroughly of septic material as to overcome the disorder. In actual obstruction the experience of surgeons by no means justifies the dogmatic assertion of some recent authors, to the effect that obstruction without laparotomy means death.

We are as yet by no means certain that it even offers more hope in the great majority of cases than the expectant method of treatment. Every physician in large practice has surely met with cases of most severe obstruction in which there have been unexpected recoveries. I saw such a patient about two years ago with a practitioner in this city. A stout man had been ill for about forty-eight hours, with all the symptoms of obstruction, pain, excessive bloating and faecal vomiting. The doctor was called in the evening, thirty hours from the beginning of the attack, and applied the usual remedies without avail. On the next morning he called me in to discuss the question of laparotomy. I found the patient excessively bloated, somewhat easier of his pain, but pulseless and cold. His whole body was covered with a cold sweat. He seemed to me to be dying, and I advised against an operation. We were dismissed, and a young doctor was called, who injected digitalin and atropin, and the patient recovered. It was evident in this case that the obstruction had been spontaneously relieved, probably in the relaxation of all muscular spasm during his collapse. I twice saw the same thing happen in company with one of the older physicians of the city. One case was inflammation of the bowels with apparently fatal collapse of the patient, and the other a case of neglected femoral hernia.

If we could diagnosticate the exact cause of obstruction, we would have an easy task to decide upon our mode of action. If we knew that an adhesive band were strangling an intestine, we should cut down and divide it. If we knew that a gut were twisted or bent, we should open the abdomen and make it straight. If we knew that a foreign body were obstructing an intestine, we should open the gut and take it out. Even in intussusception, when first begun, we should do well to cut down and pull the bowel apart. But I have often thought what would some of these surgeons, who talk so glibly of laparotomy for obstruction, do in a case of intussusception, after the first twenty-four hours after laparotomy had been performed. It takes only twenty-four hours to glue the two walls of the bowel so tightly together in an intussusception that no force can pull them apart. The bowel tears, but remains unrelieved. Excision of the affected bowel means usually death. The chances of the patient are better to adopt an expectant plan, in hope that the intussusceptions may slough and pass away through the bowel, or that spontaneous reduction may take place. If the large intestine is involved, the formation by the surgeon of an artificial anus, by opening the gut just above the seat of the obstruction, may in many cases be the best procedure. This operation is indicated, in fact, in cases of undoubted and intractable obstruction where the patient is too weak to endure a regular laparotomy. It is an operation easily and quickly done, by cutting down in the right iliac region, seizing the first portion of distended gut which presents itself, sewing it to the external wound, and then opening it freely. The distension of the gut indicates that it is above the seat of the trouble, and its position in the right iliac fossa is a proof that it is one of the lower coils of the intestine. If the gut were open too high up, the patient would soon die of inanition.

In conclusion, it must be said that the indications for abdominal section in cases of intestinal obstruction are not yet thoroughly established. The operation is justifiable in appropriate cases and imperative in some. The present hope of progress in the treatment of this class of disorders lies in operative surgery, and this may justify the somewhat dogmatic attitude taken by many surgeons in reference to their treatment by laparotomy. Physicians who are called to see such patients in the beginning of the trouble should remember that time is a most important element in their success.

Laparotomy performed early with every antiseptic precaution is not in itself a dangerous operation. Made upon an exhausted or collapsed patient, it may easily become the opprobrium of surgery.

The Prevention of Conception.

(From Proceedings of Detroit Medical and Literary Association.)

DR. C. B. GILBERT opened a discussion on the subject, "Is the prevention of conception a justifiable proceeding?" He observed that this was a question which was being talked about in private life, and in private practice. We are put upon the witness stand as physicians, and asked, Is this practice justifiable? There are many good reasons why it is justifiable. There are some reasons why it is not. Why should not a woman, if she choose, prevent conception? It seemed to him to be a purely private affair, and there was no reason why she should ask us this question. It is usually supposed that when a woman enters the married state, she will become the mother of children. However poor she may be, however unable to support a family, however much suffering she may undergo, she is supposed to bear as many children as possible. He objected to this on the score of inability to provide for the offspring alone. It is not with us as among nomadic tribes or the Moslems, where the expenses of living amount to almost nothing. We have reached a higher plane of civilization, and we are prevented from availing ourselves of the conditions prevailing in a lower.

It was to be regretted that these matters were not taught in our schools, and that a man or woman should be compelled to learn the facts of sexual life from actual experience. He asked, if we gave the advice demanded—that the prevention of conception was justifiable—what would be the effect on ourselves? We lived under certain sanctions; there was the physical sanction. We lived under a law we could not avoid. If this practice was contrary to that, if it was injurious to the organism, it was wrong from beginning to end. That is why abortion was wrong. Then, there was another sanction, the moral sanction. Some say it is against the moral law. He replied that it was not. The moral law says nothing about the matter. It was not a question of metempirics, it was a question of utilitarianism.

If the practice was unharful—and he considered it was—there could be no reason against the practice. It might be asked what might be its effect on single life. Would it endanger our civilization, our common Christianity? He thought not.

Dr. Helen Warner had some convictions on the subject, which she scarcely felt prepared to formulate this evening. She was surprised to hear opinions so radical as those propounded by Dr. Gilbert. These she did agree with. She did occasionally advise the prevention of conception. She considered it justifiable in cases where it is impossible for the woman to bring forth a living child. A woman should not be allowed to undergo a pregnancy that was likely to be fatal to herself, and in such cases she had not hesitated to advise the prevention of conception. She had not hesitated in cases where the patient was insane, or likely to become so. She was by no means so sure as Dr. Gilbert that any means of prevention which was sure was harmless. And for that reason alone she would never advise a woman to prevent conception, for the sake of gratifying an individual fancy, or even for the sake of not being able to support the offspring.

Dr. Frank W. Brown thought we all pretty well agreed on the matter of moral abstention. He asked if by the prevention of conception, we alluded to moral or mechanical means. For his own part he favored both methods. He favored the application of morals, and where that is impossible, other expedients. It is this teaching of morals which are not observed, which is so detrimental to the progress of humanity. We have too high a standard to work on. We should look this matter fairly in the face. We know something about the ill-effects of surplus population. The law of Malthus shows that population tends to increase much more rapidly than means of subsistence. As a result of this came pauperism, and we all know pauperism is at the bottom of the greater portion of crime. This was an important consideration. Every year the progress of medical science is making the condition of the world healthier. We did not have any of the great epidemics of former years. These small epidemics, such as recently occurred in the South, were picayune affairs compared with the old epidemics which numbered their victims by millions, and the chances of diminishing offspring by these means are lessening every day. How, then, are we to control the

increase of population? The way was to persuade people not to have so many children. He thought it useless to tell people to abstain from sexual intercourse. The sexual instincts were the strongest we have, and in ninety-nine cases out of a hundred such advice would prove impracticable. He thought that statistics would not prove that prevention was injurious to woman. They would, however, prove that abstention was bad for man. When asked to advise some method for the prevention of conception he did so, for it must not be forgotten that in the majority of cases some means will be employed, perhaps more harmful than those recommended by a physician. The facts of everyday life show us that a majority of people practice these methods, and among educated classes population is regulated. This high moral business would not go.

Dr. T. A. McGraw regarded this one of the questions which will in the future be considered from the standpoint of social effect. It seemed to him the medical press had taken a mistaken line in making the matter a medical question. He could not see any wrong in the prevention of conception. When a woman came to him, whose husband had strong desires, who had multitudes of children, who was poverty-stricken and sick, who suffered from nausea, and other burdens almost too great to bear, and asked how she was to prevent having more children, he scarcely liked to advise non-intercourse. To give such advice meant that the man would go to the brothel; it meant the breaking up family ties and duties. It was an individual matter for each man and woman to say how many children they could support. These large and unmanageable families were wrong. The girls who were unprotected often went wrong. The boys became worthless without parental government. Far vaster wrongs proceed from large families than the prevention of conception. The conditions are altogether different now to fifty years ago, when every man could find support for ten or twelve children. He could not do this now, and should not be the parent of children he could not support.

Dr. A. L. Worden said that there were doubtless many cases where this practice was proper and justifiable, but there were many cases where there was no excuse for it. It is not the poverty-stricken people, as a rule, who come to us for this advice. It is those who are able to support a family, in eight cases out of ten, but who from society reasons desire to be without children. He thought that we

should discriminate whom we should advise, and beware of too much leniency.

Dr. Mulheron had not sufficiently formulated his ideas on this subject to express them here to-night. He was surprised to hear this called an individual matter. He regarded it as a society matter. When a man and woman entered the marital relation, they assumed certain duties to society. He did not consider it was for us to lecture people on their social duties. If a woman considered she had a right to prevent conception, she would also have the right to empty the pregnant uterus. He considered the practice to be wrong.

Dr. Hutton agreed for the most part with the views expressed by Dr. McGraw. The question of how many children a family should consist of was a matter of individual and personal selection. The question was one of personal liberty, and if prevention could be accomplished without the infliction of physical harm, he had about made up his mind that it would be for the advantage of society. The actual means of prevention had not been spoken of to-night. He thought perhaps an irrigation of a bichloride of mercury solution might be effective.

Dr. Bonning thought it was unfortunate for people to bring forth so many children. The nations who do not regulate population were now unable to support themselves. This was seen by the emigrants who seek our shores, who were Irish, German, Polish, but seldom French. France is now one of the richest and most prosperous countries of the world. If prevention can be safely prevented, he was of opinion that it should be.

Dr. Gibson thought every one should say exactly what they thought. He did not consider it was right to do wrong that good might come. The practice is wrong, and he endorsed all that Dr. Warner had said. If the prevention of conception is right, abortion is right. He regarded it as homicide.

Dr. Chittick did not agree with this being an individual matter. He thought every physician should use his best judgment in giving advice.

Dr. Webber remarked that it had been said this evening we were not moralists. It is a well known fact that through sin sickness and disease came into the world. It is through breach of the moral laws that we have, as physicians, obtained our employment. It is a natural law which brings

man and woman together for the purpose of cohabitation, and it is one of the natural laws to allow the results of that cohabitation to fulfill their course. It is natural for a woman to menstruate. It is natural that this physical law should find its expression in the ovaries. The ovaries should have rest, and pregnancy was the natural condition of ovarian rest. By thwarting this law, many diseases were engendered. Our American women are fast failing, and the women of the old country are taking their place. It will soon be a rare thing to find a woman who can trace her ancestry back three generations. He thought the practices alluded to were decidedly harmful.

Dr. Banks thought the natural period of rest for the ovaries were the inter-menstrual periods. There may be cases where it is right to prevent conception, but she did not agree with many of the speakers to-night.

Dr. Stevens considered that every one should formulate their answer to this question themselves. The question was one which could not be separated from morals. He believed conception should be prevented in those cases where child-bearing was dangerous to either mother or child. It should be prevented in all cases where heredity indicated mental incompetence. He thought that conception should be prevented by non-intercourse. He did not believe it was ever intended that the indulgence of sexual desires should be a pleasure, or that it should be pursued for pleasurable motives. A higher order of conduct prevailed among the lower animals than this would indicate.

Dr. Devendorf was delighted at the high morality of his friend, Dr. Mulheron; the angelic purity of the gentleman who had last spoken was beyond criticism, and as for the gentleman who described the practice as homicide, he would doubtless go in mourning after an erotic dream. We did not come here to discuss moral questions, but to inquire whether it is best for humanity to allow every man and woman to have as many children as possible. We know that nine-tenths of the educated classes are using means to prevent conception. As for the injuriousness of the practice, Dr. Van der Warker had some time ago examined a community in which the practices were carried out to the fullest extent, and no harm was found to have accrued to the females, and as for the males they could stand it. He thought it for the good of humanity to limit the number of children.

Dr. Carstens considered the ground pretty well covered. He did not agree with Dr. Gilbert that the affair was entirely personal. He thought it was a matter for the State. The reasons assigned by Dr. Warner for the prevention of conception were practically admitted as justifying abortion. He agreed with Dr. Stevens in preventing conception where hereditary reasons indicated; it was a positive crime for people to be married in the last stages of consumption. It was wrong for insane and criminal classes to perpetuate their race. He thought all insane and criminal individuals should be castrated. One of the objections to the prevention of conception was that it was practiced by those who ought to propagate the new race. Where the remedy was needed was among the pauper classes.

Dr. Gilbert, in concluding the discussion, again repeated that there were no laws regulating the propagation of children. It is a matter which must be left for individuals to settle. Every one agrees that it is as natural to have intercourse as to have children. He remembered being called to see a young man whom he found in a house of prostitution. The man had two children and a home, but his wife was cold and he had wandered into this resort. If the wife had known how to prevent conception, she would have been able to have retained him at home. It was a shame that these matters should not be known; it was absurd and ridiculous.

Adjourned.

F. W. MANN, M.D., Secretary.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy,
Cincinnati, Ohio.

THE ACUTE HEPATITIS OF ALCOHOLICS.

BY ALEXANDER PILLICKT.

THE relations of alcoholism to maladies of the liver are among the best established points in pathology. The absorbed alcohol acts at first on the digestive tube, then on the liver by intermediation of the portal system, and this action can follow three different modes, whence result three grand forms: The "*acute hepatitis*," much the rarest form; "*alcoholic fatty cirrhosis*," and the "*ordinary venous atrophic cirrhosis*."

The atrophic cirrhosis was the first thoroughly studied, and the form of granulated atrophy of the liver was sufficiently rapidly isolated. In England the alcoholic origin of *hob-nailed* liver was long ago admitted and consecrated by the masterly treatise of Budd on the diseases of the liver. In Germany the same correlation was signalized by Bamberger. In France, according to the observations of Andral and other authors, we see Regnин affirming the close relationship of the interstitial hepatitis to alcoholic excesses; then Lancereaux described and fixed in a definite manner, that is, from an anatomical and clinical standpoint, the type of the drinker's liver. Professor Charcot made a topographical study of this cirrhosis and shows that the small liver, with yellow spots, presents a peri-venous extra-lobular sclerosis; and Labourin, by a study of the intra-lobular glissonian veins, explains whatever may have remained obscure in the histological study of these lesions. To this sclerous liver correspond the ascites, the hematemeses; icterus is exceptional.

Besides this form, characterized especially by a hyperplasia of the connective tissue, there is another in which the cells are more especially affected and swollen by the production of fat, whence results an augmentation of the volume of the liver.

It is this cellular degeneration which first attracted attention; Peters, of New York; Addison, Budd, Frerichs, etc., showed its frequency in the livers of those notably alcoholic, as, for instance, in persons dying with delirium tremens. Later on, the observations of Hutiinel on the livers of alcoholics who had become tuberculous, those of Labourin, on the fatty sclerous liver of the tuberculous, showed that besides these lesions of the parenchyma, there existed tracts of sclerosis absolutely net and frequently very developed. The question had to be studied, therefore, from the standpoint of cirrhosis, which is bivenous, and presents the same characters as in the small, granular liver. But it is complicated by an etiological discussion which is still going on, these attributing to the tuberculosis this ensemble of lesions which the others attach to alcoholism. Among the latter is Gilson, whose excellent thesis marks an era in this history. We believe, for our part, that typical fatty cirrhosis exists among non-tuberculous alcoholics, for we have seen very marked examples of it, followed by autopsies, while interne to Prof. Lancereaux. We believe, also, that there exist

forms of tuberculous hepatitis in which the sclerosis and the fatty state of the cellules are due to the tuberculosis or to an infection; the future will break up this very confused group. The difficulty lies in the existence of mixed forms in persons who arrive at a tuberculous state by passing through alcoholism; and they are very numerous. However it be, alcoholic fatty cirrhosis supervenes in individuals much younger than the preceding one, who, having presented anteriorly an excellent state of health, commit rapid excesses, or, like many workmen of our large cities, endure painful toil and acute intoxication. The liver is then large and painful, there is tympanitis, which indicates a diminution of the biliary secretion; in general, there is no ascites, there are observed paroxysms of subicterous haemorrhages of the skin or of the conjunctiva; the course is very rapid finally, the co-existence of tuberculosis is frequent.

Finally, the third form of alcoholic hepatitis is the acute form, diffuse, in which the series of symptoms recalls to us ictere, grave, either primitive or secondary, to infectious maladies. It is somewhat left in the shade; nevertheless it presents anatomo-pathological characters which we desire to bring out in relief.

Diffuse hepatitis may present two different modes; the first, the suppurative form, is rarely observed in our climates. Perhaps in this form the alcohol plays only the role of a predisposing cause, favoring the infection of the liver by the parasites of the digestive tube; more especially the microbe of dysentery, which, through the intermediation of the portal vein, is the most frequent cause of suppurative hepatitis, as has been shown by Kelsh and Kiener in their treatise "On Maladies of the Hot Countries." However, the abuse of alcoholic drinks has always been noted by Annesley, Cambay, and various other physicians of the Anglo-Indian army, as one of the most frequent causes of intertropical abscess of the liver.

The second form has been most clearly brought forth by the article of Lancereaux on alcoholism. He states that he has observed two cases of it accompanied by icterus, by adynamia, by syncopy, by convulsive paroxysms; that it frequently terminates in recovery, and would thus be brought into the category of those benign typhoid icteri, the cause of which so frequently escapes us, upon which a number of works have of late years been published. Ac-

cording to Lancereaux,* Bright likewise described two cases of jaundice with hepatic inflammation in alcoholics. Another case, belonging to a Galician physician, Horaczek, is found reproduced in rather an old memoire (1855) on Typhoid Icterus, by Lebert. But, without occupying ourselves with curable forms, we shall take up some of the observations accompanied by autopsies; they will give the reader a better idea of the characteristics of this hepatitis.

Frerichs† reports the case of a mason, thirty-six years of age, of well-known alcoholic habit, and afflicted with chronic digestive troubles, who was brought to the hospital in a demi-coma, with slight icteric discoloration, the urine contained a little biliary pigment. The next morning the icterus was more profound, the coma augmented, and the patient died in three days. The liver presented a marbled appearance of red and yellow; it presented numerous points of circumscribed inflammation; its consistency was doughy. A minute examination revealed that the cellules were destroyed and replaced by numerous drops of fat and particles of coloring matter.

There was augmentation of the connective tissue of the organ. The urine contained creatine in great quantities. Frerichs insists upon the admixture of old connective tissue, lesions, and recent parenchymatous lesions observed in this case.

‡ Leudet had occasion to see a man, still young, who, by mistake, had swallowed a large glass of very concentrated alcohol. He remained three days in a state of drunkenness, and on the sixth day after his accident there appeared a slight icterus, which grew rapidly deeper; the patient died quickly with adynamia, fuliginosities, coma; in short, the whole symptomatology of ictere grave. At the autopsy the stomach was found shriveled, with about twenty ovoid ulcerations; the liver was one-third less voluminous than normal, soft, discolored in spots; it presented points of slight yellowish discoloration, in which, by microscopic examination, a few very granular hepatic cellules were recognized and much amorphous magma. He concludes, therefore, that there existed an acute diffuse alcoholic hepatitis.

* Lancereaux' article "Alcoholism," Dict. Encycl. des Sc. Medic., T. ii., 1869, p. 632.

† Frerichs' "Diseases of the Liver."

‡ E. Leudet, Clinique Med. de L'hospital Dieu, de Rouen, 1874, pp. 39-43.

A second case, a patient who had committed notorious alcoholic excesses, presented icterus, with adynamia, predisposition to haemorrhages. He died very quickly, and there was found a very voluminous liver, fatty with some points of a pale yellow on the surface of the organ. At these points tissue of the liver is softer and the greater part of the hepatic cellules are rather indistinct; many are reduced to a granular magma and mixed with fatty granulations.

We thus see that this diffuse hepatitis makes itself manifest by icterus, preceded by digestive troubles. At first sight it increases rapidly, and, at the same time, there appear prostration, adynamia, hebetude, coma, tendency to haemorrhages. The tableaux is thus very much like that of terminal secondary ictere grave, which complicates infectious maladies of the type named by the ancients putrid or malignant. The liver, fatty and discolored, may present extensive cellular destruction, as in complete ictere grave, or only minute points of degeneration, as in the two cases of Leudet. What is the value of these lesions? A glance at the history of infectious hepatitis will inform us.

The lesions which the liver can present in the acute infectious diseases are of three classes: Lesion of the vessels, that is, accumulation in the vessels of embryonic cellules and around them in the form of rings or nodules, with or without microbes; lesions of the cells, that is, tumefaction, as described by Virchow, or the microbiosis of Weigert, the fatty degeneration of Lereboulet; and, finally, superadded lesions, such as the masses of leucocytes, and of microbes which are arrested in the intralobular capillaries, and there form small nodules, surrounded by a zone of cells undergoing degeneration.

It is this last lesion which forms on the surface and in the depths small, white masses resembling tubercle, and composed of degenerated hepatic cells. Budd* reports such a case occurring in the course of a typhoid fever. It is easy to see by a comparison of observations that the degenerated circumscribed nodules are very much like those which Leudet describes in alcoholism. The characters of the liver in acute alcoholism with icterus are thus the same as in the infectious liver containing microbes.

Moreover, M. Cornil and Brault have shown that in phos-

Budd's "Diseases of the Liver." Ed. 2. 1852. p. 162.

phorous intoxication the cells and nuclei of the liver underwent degeneration similar in all respects to that met with in the infectious diseases.

M. Strauss and Blacq, in their experimental researches, have caused rabbits to ingest daily pure alcohol (*Archives de Physiologie*, 1887), and they have verified the presence of infiltration and of embryonic nodules in the portal spaces, as if it were a case of true infection. We thus see that there are no clear and well-defined lines, at least not for the liver, between the lesions due to infection and those arising from intoxication. There is only one differential characteristic, and that purely negative, namely, the absence of microbes in the latter class of cases.

This conclusion can not surprise us, for the tendency is more and more to admit that the pathogenic microbes do not act directly upon the cells and tissues, but by the intermediation of soluble ptomaines which they secrete. In short, they produce a poisoning, and there is, therefore, a complete identity between the two processes, infection and intoxication.—*La. Tr. Med.*

Selections.

Academy of Medicine, New York.

SECTION ON PÆDIATRICS.

THE paper of the evening was read by Dr. L. Emmett Holt, entitled

THE ANATOMICAL CHARACTERS, NOMENCLATURE AND TREATMENT OF THE DIARRHŒAL DISEASES OF INFANCY.

Dr. Holt's paper was based on pathological and clinical observations of seventy cases of these diseases occurring in his hospital service, and in nearly all these cases an autopsy had been made, his observations extending over a period of two years. Dr. Holt dwelt strongly on the necessity of a new nomenclature for the diseases of children. Perhaps the simplest pathological division that could be made would be into diseases which possess lesions and those which do not. For clinical and descriptive purposes, the nomenclature should be reformed, the same name being used by various authors to indicate totally different diseases.

That many of the diarrhœas are the result of germ infection should be recognized, named and grouped together as mycotic diarrhœa.

Other diarrhœas were the result of acute and chronic dyspepsia, others of catarrhal processes, while in still others there were marked pathological changes, such as follicular ulcerations, entero-colitis, enlargement of the solitary glands, or the formation of a croupous membrane.

His autopsies had all been made shortly after death, some as early as two hours, to obviate the post-mortem changes.

The commonest complication he found in these cases was broncho-pneumonia. One point on which he would lay particular stress was in the use of the name dysentery. Disentery was a misnomer, and but a symptom common to several forms of intestinal ulceration, and should not be used to indicate a disease.

Discussion.—Dr. Caillé opened the discussion on the dietetic treatment, and dwelt strongly on its great importance. The diet of infants should be managed with care and judgment; proper food can be improperly given, and digestive and intestinal troubles result. In these cases abstinence from food for twenty-four hours will work wonders; the child in the meantime taking mucilaginous drinks. Milk should not be used in the city without being sterilized, and the patent baby foods should never be used. Cow's milk can be perfectly adapted to the infant's use by dilution, adding sugar, and sterilizing. When we speak of sterilizing milk there is one important point: to be certain of the purity and condition of our milk before doing so. A pre-digested food is of the greatest value in building the infants up, and sustaining their strength.

The discussion on the mechanical treatment was opened by Dr. Koplik. The mechanical treatment, or gastro-intestinal irrigation method, aims to remove the source of irritation, to thoroughly cleanse the stomach. Dr. Holt lays stress on mycotic infection. By this mechanical method, if applied sufficiently early in the disease, the thorough washing out of the stomach will abort the disease. There are two varieties of mechanical treatment, the stomach washing, and the intestinal irrigation. It is used in both acute and chronic cases, but is of particular value in acute cases.

Washing out the stomach offers the most rapid and complete method of cleaning out that cavity, but washing out the

stomach must be accompanied by due attention to diet and medical treatment.

Dr. Seibert: I have had over six hundred cases of irrigation, varying from thirty-six hours' age upward, in the two and a half years I have used this method. I am called a short-sight enthusiast, but I am certain that I have done so much good that I do not mind that. Before we commence the dietetic treatment we should thoroughly wash out the stomach. I know that in ten years this will be the general treatment. I have cured undoubted cases of cholera infantum by this treatment.

Dr. Baruch thought that we now have ample warrant for believing that most summer diarrhoeas in infants are due to a multiplication of micro-organisms in the gastro-intestinal canal, introduced there by the milk food. These multiply in the stomach, precipitate casein rapidly, send it unprepared into the duodenum, and thus produce pathological conditions pictured by Dr. Holt. Fermentation and decomposition incident to the accumulation of pathological products produce an excellent culture medium, in which the micro-organisms multiply, and develop ptomaines, whose ultimate effects are the alarming symptoms we encounter.

Dr. Baruch drew an analogy between puerperal infection and the infection of mycotic summer diarrhoeas, from which he enforced the lesson that we should not rest satisfied until the same perfection has been attained in keeping the stomach aseptic as has been now reached in keeping the utero-vaginal canal aseptic. To the latter we are indebted for the almost complete abolition of puerperal infection. The former can be accomplished only by rigid sterilization of the milk. Breast milk is sterile; so is cow's milk in the udder. Breast-fed infants die only in proportion of three to one hundred of artificially fed. Soxhlet is entitled to the same credit as was Semmelweiss in the matter of puerperal infection. But he does not go far enough, valuable as are his results. He brings the milk just to a boiling temperature. This does not sterilize it. Pasteur, Schroeder and Loeffler insist upon a temperature of 30° C., because they have discovered bacteria in boiled milk—although it was not sour—but none if the latter temperature had been reached. Soxhlet's apparatus is valuable, not because it sterilizes the milk, but because it shields it from contamination until it is put into the baby's mouth. Biginsky complains that its use has not correspondingly diminished cholera infantum.

Whenever we will be able to bring to our babes milk that has been subjected to a temperature of 266° F. for half an hour, and has been kept pure and undefiled, we will reach the same degree of prophylactic success that the obstetrician enjoys to-day. Dr. Baruch deprecated the use of antimycotic drugs; they can not be sufficiently concentrated to destroy bacteria. After sterilization of milk, the mechanical treatment is the most valuable.

Two points have been raised against stomach washing: one, that the catheter will not bring up the clots of casein. We may not bring them up through the catheter, but by the catheter we can fill the stomach full and overflowing, and thus by vomiting bring up the clots. The second objection is that we only clean the stomach of its contents, and do not affect the germs in the mucus membrane. It is true; but the same objection holds good in any form of irrigation, and no one denies the value of irrigation in surgery.

One great factor in favor of irrigation is, that it is absolutely without danger.

Dr. Fruitnight, discussing the medical treatment, spoke of the great value of opium in the diseases of children, but noted the great caution necessary in its administration. Squibb's compound tincture of opium he recommended in 1-5 m doses, after the first year. Opium may be administered by the mouth, by enema, or by suppository.

Dr. Chapin differed with the advocates of mechanical treatment. It is claimed that lavage does not remove the germ from the epithelium, and if that is so, we should wash out the stomach each time, before we give sterilized milk. I think that in many cases lavage is not necessary, and in some of my cases the washing did not do any good. I believe that lavage is a very valuable method of treatment, but that its sphere of application is limited. I have an objection to Soxhlet's apparatus: it does not sterilize the milk, and milk prepared by this method will only keep fresh two days. Sterilizing by steam will keep it five or six days; but by steam sterilization for an hour and a half I can keep it six weeks. I regard the irrigation method as being without danger, although the child's struggles and blue face make it better for us to keep the mother out of the room.

Under a careful application of dietetic rules, I do not think that irrigation would be needed so often.

Dr. Winters: I am surprised to hear cholera infantum spoken of as of such common occurrence. In a large expe-

rience I have only seen three cases. They all occurred in tenement houses. In the mechanical treatment I can see nothing new. We have been using it for years; all of us here have used it, also our predecessors. We have emptied the stomach and intestine as a routine matter in these cases; not by irrigation, it is true, but by emetic and laxatives, which are as effective; and then, on the diet of sterilized milk, they will do as well as those who have been irrigated. Irrigation has been carried to too great an excess, and has been brought into disrepute. No matter how skillfully it is done, it will excite alarm, and carried out to the extent mentioned to-night will drive our patients over to the homœopaths.

Dr. Caillé: I do not agree with Dr. Holt in his proposal for a new nomenclature. Our knowledge is not yet so perfect as to warrant the change. In reply to Dr. Baruch, I would say that Soxhlet never claimed his apparatus would completely sterilize milk. If the Soxhlet apparatus only preserves the milk for a few days, it is of great importance; a sufficient quantity can be made for daily consumption.

Dr. Seibert: I am having an improvement of Soxhlet's apparatus made that can be sold for \$1.00.

Dr. Baruch said that he had seen cases of pure cholera infantum in the piney woods of South Carolina, and spoke of a case which the chairman had seen with him in that beautiful suburb of this city—Audubon Park. He referred to the great benefit he had derived in the latter from the cold bath, graduated from 90° to 80° F., followed by the cold pack, which rescued a desperate case (with 160° temperature) from imminent death.

A specimen of sterilized milk was presented to the Section, which was offered at a cost of \$3.00 per dozen of six ounce bottles (with rebate of 60 cents for bottles). Several members expressed the improbability of encouraging its adoption at such a cost.—*Times and Register.*

SECTION ON THEORY AND PRACTICE OF MEDICINE.

(Stated Meeting, March 18, 1890.)

PULMONARY CONSUMPTION IN THE LIGHT OF MODERN RESEARCH.

In a paper with the above title, Dr. S. S. Burt reviewed the recent studies upon this subject, dwelling more particularly on the important questions of infection and prophylaxis.

laxis. He said that while his experience had led him to believe that pulmonary consumption was not contagious in the ordinary acceptation of the term, there was abundant evidence to show that those who were long and intimately associated with phthisical patients were liable to contract the disease; and he instanced in support of this assertion the high mortality existing in certain cloisters, where as many as fifty per cent. of the inmates died from the disease. Absolute safety could only be secured by segregation. He had great hopes for the future from Koch's discovery.

The paper was followed by a lantern exhibition by Dr. J. H. Linsley, who illustrated the appearance of tubercular tissues and bacilli by an unusually fine series of photo-micrographs.

In the discussion that followed, most of the speakers felt called upon to consider the question, "What is the use of Koch's great discovery?" Their answers embrace the two extremes of enthusiasm and despondency.

Dr. A. Jacobi, who opened the discussion, spoke particularly of the question of the direct transmission of the disease by inheritance. There was an inherited predisposition, as shown by congenital deficiencies in the lungs, the circulatory apparatus, and the conformation of the chest. He cited the views of a number of eminent pathologists, showing that the general opinion among them was against direct transmission. Nevertheless, in five out of eight cases, one investigator had found tubercle bacilli in the spermatic canal and in the prostate of phthisical individuals, although there was no tubercular process in this particular locality.

Dr. W. H. Draper thought that Koch's discovery had contributed but little toward mitigating the great scourge of tuberculosis, and that it had even complicated the subject. The role played by the bacillus in this disease had not yet been definitely determined; for, in certain localities, and under certain conditions, it seemed to be comparatively harmless. Thus it was that the bacilli were present in the glands, and in lupus for long periods, without giving rise to any serious symptoms. Even in the lungs, where they usually gave rise to grave disorders, one occasionally found only a circumscribed process, which eventually terminated in complete recovery. It had been suggested that phthisis was a mixed infection, and that the bacillus itself must come in contact with some other organism before it could cause general infection. The bacilli were far too widely disseminated

for us to hope to exterminate them ; and although we had reason to believe that dried sputum was a very common medium for the spread of the disease, he doubted very much whether it would be possible to control the American habit of expectoration. The discovery of the tubercle bacillus had helped us, chiefly by giving more definite and cogent reasons for urging our patients to avail themselves of the advantages of a change of locality.

Dr. A. H. Smith was also disposed to take a gloomy view of the situation. While the search for specifics should not be entirely discarded, it had the disadvantage of leading us away from useful and well-tried methods of treatment. He had had opportunities of watching the progress of tuberculosis in families in rural districts, and he had been led by these observations to conclude that the great mortality in such families was referable not so much to hereditary tendency, as to environment. These people lived in poorly ventilated apartments, whose furnishings often remained unchanged for generations, and so harbored the elements of contagion. If we were to accomplish anything by prophylaxis, we should begin with the little children, and our efforts in this direction were very commonly frustrated. No mention had been made in the paper about the relation between bronchial catarrh and tuberculosis. The former was often the starting-point of consumption ; and the explanation might be found in the fact that it affords a favorable soil for the bacilli, or that the protection afforded by the epithelium against the entrance of these organisms is lost. In regard to treatment, he had been much impressed by the value of supplementing the ordinary methods by a resort to rectal alimentation. He had seen very remarkable results from this method.

Dr. R. C. M. Page touched another point of prophylaxis by calling attention to the evils following the marriage of tuberculous people. He thought such unions should be prohibited, or at least restricted.

Dr. J. W. Roosevelt, while not an enthusiast, believed that the use of Koch's discovery was already more apparent than that of many previous discoveries. If it only enabled us to save a few lives, it is still worth knowing. It had certainly led to much foolishness ; but it had given a point upon which, in the future, we might build up a method of treatment, both prophylactic and curative. It had certainly taught us that it was our duty to destroy the bacilli as far as

possible; and, although we might be unable to control the national habit of expectoration, it was none the less our duty to win over as many as possible to the new order of things, and make them spit into the fire, or into receptacles which could be afterward burned. Among the most foolish methods of treatment that have claimed the attention of the profession in recent times, were the uses of gaseous enemata and hot air. The latter method was particularly absurd, and was advocated in defiance of well-known principles of physiology and physics. The cooling power of the lungs, from the presence of so much air, and of the constantly circulating blood, was so great that it was easy to see that it would be a difficult matter to raise the temperature of this air to any great degree. Moreover, the specific heat of water is high, and the latent heat is 54° C.; hence, if the air reached the temperature claimed by the advocates of this method, the albumen of the blood would be coagulated. In accidents from the bursting of steam pipes, the steam must be below 212° F., or else it would not appear as a visible vapor; and yet such patients were severely scalded, and often suffered from a complicating pneumonia. It had not as yet been made clear why pulmonary phthisis should attack by preference the upper lobes of the lungs; and there seemed to be no mechanical, or other reason, why the bacilli should lodge there more abundantly. It had been said that these portions of the lungs had a more limited movement; but if so, they would receive less air, and, therefore, fewer bacteria. Others had claimed that the upper lobes were deficient in expiratory power; but this theory was still more perplexing; for if such were the case, the air would necessarily accumulate, and ultimately cause a rupture of this portion of the lung. It had been recently shown that fresh blood-serum contained something which was capable for a short time of destroying bacteria. It was not impossible, therefore, that we might be able to find some such substance, which, when supplied to the blood-serum, would result in the destruction of the bacilli.

Dr. E. F. Brush related an interesting experiment which he had made while endeavoring to raise tubercular chickens. Six laying hens were set apart and fed exclusively with the lungs of a cow that had died of acute miliary tuberculosis. At the end of seven days, one hen was killed, and tubercular deposits and bacilli were found. The twenty-six eggs which had been laid by these fowls were removed to another

part of the farm and set under other hens. Twenty-five developed chickens, but not one was hatched alive. If he had anticipated such a result, he would have made use of control experiments at the same time. There were certain cows which were always "in heat," and no matter how often served with the bull, they never became pregnant. He had removed the ovaries from three such, and had found them tubercular. He had lost no opportunities for examining foetal calves from tuberculous cows, but never had seen in them the gross appearances of tuberculosis.

A Case of Uterus Bicornis Unicollis, with Parenchymatous Abscesses of the Portio-Vaginalis.

BY ANDREW F. CURRIER, M.D.

Read before the Obstetric Section of the Academy of Medicine of New York, March 27, 1890.

THE case which is here narrated is considered worthy of particular attention and record, because of the unusual feature which it presents.

The patient is a married woman twenty-five years of age, and was first seen August 15, 1889. She was thin and poorly nourished, and consulted me because of very troublesome external haemorrhoids. She has been married eight years; is the mother of five children; all her labors have been tedious, and the last three have been cases of breech presentation. These labors occurred in '81, '82, '83, '84, and '86; that is, in the space of about five years. She has had no miscarriages. Her menses began when she was sixteen years of age; they are painless, recur every four weeks and continue two days; the loss of blood is small, and the blood is dark, like ordinary menstrual blood. She does not suffer from leucorrhea; and the only pain of which she complains is that which is associated with haemorrhoids. Her temperament is phlegmatic, and her appetite good. There is some irritation of the bladder, which manifests itself by frequent urination, but the urine shows no points of unusual interest; the tongue is clean, the pulse ninety-two per minute and of good volume.

Examination of the genital organs shows a relaxed condition of the vulva and vagina, and a very large vaginal portion of the cervix, which also is fissured and indurated.

The body of the uterus is retroflexed and adherent. There are also fissure of the anus and large external haemorrhoids. Her general appearance is that of a woman of considerable inherent vitality, who, like so many others of our tenement-house population, has been subjected to bad or brutal treatment, has been half starved, and perhaps is not altogether without vicious tendencies.

She was first operated upon August 21st, the anal sphincter being stretched and the haemorrhoids ligated. Emmet's operation upon the vaginal portion of the cervix was also performed. In removing the wedge of tissue from the left side of the cervix a parenchymatous abscess containing about a teaspoonful of pus was opened. The cavity of the abscess was irrigated and its lining membrane was curetted, but the operation-wound did not heal well. The tissue of the cervix at the time of the operation was of the most intense hardness I have ever seen. It was almost impossible to cut it even with a sharp scalpel, and next to impossible to force a needle through it.

A second operation was performed in September, the endometrium being carefully curetted, and the vaginal portion of the uterus amputated. In the course of the latter procedure another abscess containing only a few drops of pus was opened on the right side of the cervix. It was a matter of great surprise that the intense induration which had characterized the tissues only a few weeks previously had disappeared, and they were now sufficiently soft to be readily cut with a knife and penetrated with a needle. Tait's operation was performed on the perineum, and the healing of both wounds was entirely satisfactory. A month later (October 25th) an abdominal section was made for the purpose of releasing the retroflexed and adherent uterus. The adhesions were readily separated, the left tube and ovary appeared to be entirely normal, while the right ovary was two or three times as large as the left. The right ovary and its tube were removed. While the uterus was still held up by the ligature around the stump of the tube and ovary, I passed my fingers into the pelvis, as the relations of the parts had seemed a little unusual, and I had previously remarked to my assistant that I thought the rectum was distended with faecal matter. He expressed doubt as to the possibility of such a condition, since the patient's bowels had been thoroughly evacuated a few hours prior to the operation. Examining the supposed rectum carefully, it

was found that a tube and ovary proceeded from its outer side, and hence it was evident that I was dealing with a bicornate uterus. My friend, Dr. Nilsen, who was present, was asked to make an examination and verify the diagnosis, but absolute certainty was attained by drawing the structure upward into the wound, when the true condition of affairs was evident to all who were present, including the staff of the Post-Graduate Hospital, and a number of gentlemen in attendance at the school. The two structures were symmetrical with each other, pear-shaped, about two and a-half inches in length from the top of the fundus to the bottom of the wide sulcus which separated them, and each was in all respects like any normal well-developed uterine body, except that the inner side of each was perfectly smooth, and without projection or appendage of any kind. The round ligaments proceeded in a normal manner from the outer side of each organ, and these were shortened according to Wylie's method, which seems to me the simplest and most efficient way of shortening these structures from within the abdominal cavity, for it does not, like the other intra-abdominal operations, introduce conditions which are out of harmony with the normal anatomy of the parts. The patient's recovery was entirely without incident or mishap, and she was able to go home in three weeks from the time of the operation.

Her health is now much better than it had been for a long time, and it is an easy matter to pass probes into the two uterine cavities from the single cervical opening. There are three points to which I would like to call especial attention in this case: First, the changes which took place in the uterine tissue after the first operation; second, the existence of abscesses within the muscular structure of the uterus; third, the very great rarity of the condition, which, according to Kussmaul's classification, is known as *uterus bicornis unicollis*.

An indurated condition of the vaginal portion of the cervix uteri is by no means rare, and I refer in this connection only to the uterus of parous women. Attention was long ago directed to it by Scanzoni in his discussion of the subject of chronic metritis as the condition which follows the hyperæmic and softened condition in uteri in which complete involution has not succeeded parturition. In the light of this case, it seems to me we can not say that parenchymatous metritis does not exist, and while Bennett and the French school

which he followed were in error in attributing so much importance to the condition especially with reference to metritis affecting the cervix, they were more nearly correct than those who say it does not exist at all. Certain it is, in the case which is here narrated, that after the first operation upon the vaginal portion, the tissues underwent a process of resolution which would be quite unusual, to say the least, if they had been the seat of new formation of connective tissue and not of inflammatory exudate. But the presence of the two interstitial abscesses settles the question of inflammation in this particular case. They were entirely within the muscular structure of the organ, unconnected with the endometrium, and it is inconceivable that they should have existed without a precedent condition of inflammation. I have found no record of a similar case. Siredey and Danlos, in their article "Metrite," in the *Nouveau Dictionnaire de Medicine et de Chirurgie Pratique*, state that some authors have spoken of interstitial abscess in cases of acute parenchymatous metritis, but no references are given, and I infer also that they are speaking of abscess in the body and not in the cervix of the uterus. Bandl (article "Uterus" in *Eulenburg's Encyclopadie*) believes that such parenchymatous abscesses (in the body of the uterus) may occur, but they are very rare, and he thinks that those which have heretofore been described as such may have been perimetritic collections of pus which were discharged through the abdominal wall, or into the bladder or intestine. Sireday and Danlos (*loc. cit.*) believe that abscesses of the parenchyma in acute non-puerperal metritis are so exceptional that one can almost doubt their existence, and yet they add that Depaul, Scanzoni, and Bird have reported cases which were unquestionable.

The malformation of the uterus in this case is a matter of unusual interest. The normal fusion of the ducts of Muller in the embryo by which the uterus is formed, begins from below (at least according to some authors), and extends upward until the entire organ is symmetrically formed as to its two halves. The failure of these ducts to fuse gives rise to the various malformations and deformities of the uterus which may vary between uterus and vagina didelphys—in which there is complete separation of the two segments from the beginning of the vagina upward, and uterus cordiformis, in which there is complete union except at the fundus.

The classification of the subject by Kussmaul is satisfac-

tory, and I know of no one who has improved upon the system which he introduced. In this case union had progressed no farther than the utero-vaginal union, producing the variety which was called by Kussmaul uterus bicornis unicollis. A picture of this condition is shown in Garrigue's excellent article on malformations of the uterus in Mann's *Cyclopædia of Obstetrics and Gynaecology* (Vol. I, p. 249, Fig. 88), and others may be found in the obstetrical treatises of Lusk, Shroeder, and others. In all the illustrations which I have seen the uterus was of either a virgin or a child, while in my case there was excellent development of both horns and the woman was the mother of five children. The left horn, which was retroflexed and adherent to the pelvis, was nearly centrally located, and the easy passage of the probe into its cavity before the operation disarmed all suspicion of the true condition of affairs. The normal condition of its tube and ovary also suggested that this was the portion of the organ in which gestation had been accomplished. During pregnancy there must have been more or less enlargement of the other horn, and this would have caused more or less obliquity of position of the pregnant horn, and may have accounted for the breech presentations in the last three labors. Why this influence did not act similarly in the first two labors I am unable to say. The literature of pregnancy in the bicornate uterus is very meager. Benicke reports a case in a uterus didelphys. Kussmaul has found only ten cases in the literature previous to 1877 (*loc. cit.*). Furst has reported several cases, but I was unable to obtain access to his article.

Schatz has published a table of sixteen cases in which there was some form of incomplete union of the female genitals, six of them occurring in new-born infants, and Garrigues has reported several cases in his article, to which allusion is made.

Myxœdema

BY JAMES F. HIBBARD, M.D., RICHMOND, IND.

In a Paper read before the Indiana State Medical Society.

THE patient, Mrs. B., a lady fifty years old, consulted the author in regard to her general health, which had been failing for almost a year without her being able to describe any

definite disease as the source of her invalidism. Her only departure from typical good health for years previous had been a perpetual looseness of the bowels, often associated with free hemorrhage. This was probably due to rectal ulcer, but as she declined examination, this was conjecture. At forty-two years of age she had an attack of enteric fever, which suspended her catamenia, which have never returned. Dr. Hibbard remarks, parenthetically, that in his experience no woman who has had enteric fever after forty years old has ever menstruated again, and asks if his experience is unique? At the time he began to treat Mrs. B., her weight was one hundred and forty-three pounds. For months preceding she had suffered from a sense of general weariness, abatement of mobility, disinclination to active exercise and lessened ability to concentrate her mind on any important affair. She had been troubled with a form of dyspepsia, her stomach seeming to swell and bloat after eating, a sense of fullness, heaviness and distress in her head, rather than actual pain, and a gradually increasing swelling of the whole surface of the body and apparently of the mucous membranes. Her skin had become dry, pale and sallow. It was swollen and puffy, particularly about the feet and hands, but she complained especially of the thickness and weight of her eye-lids and surrounding tissues. Her limbs had lost their normal suppleness and she walked with unsteady gait; her hands were swollen and stiff, their tactile function impaired, making it difficult to hold a pen or write a legible hand. Her nails had become friable, and would crumble instead of cutting smooth under the scissors. She was very sensitive to low atmospheric pressure, and complained of general subjective cold—particularly cold extremities and nose. She realized a slothful vital activity at large and a notable hebetude of mental operations.

Examination disclosed no special error in respiratory, circulatory, urinary, uterine or digestive apparatus, excepting the dyspeptic disorders before mentioned.

TREATMENT.—The patient was advised to suspend her literary engagements, as an evening of study would be followed by an uneasy, restless night, and morning would find her eyes swelled almost shut, and face distorted with increased, irregular tumefaction. Moderate outdoor exercise was recommended. Mild doses of quinia, strychnia and iron soon made a favorable impression on her condition, and she has continued to improve slowly up to the present time,

and is now attending to her household duties and does some literary work without injury, but still presents a remnant of her serious ailments of two years ago. Now what is the disease that afflicts this patient, and what is its essential pathological nature?

It is a typical case of Myxœdema of favorable progress and promising prognosis; a mild attack to be sure, but disclosing all the characteristic symptoms of Myxœdema.

The essential pathology of this disease is still *sub judice*, but the majority of investigators accept the doctrine that it is a trophic neurosis, and has for its chief etiological factor the destruction or deterioration of the thyroid gland, and that mucin permeates the dermal and subdermal connective tissue, the mucous membranes, and possibly all the viscera of the body; is the cause of the most notable symptom, viz.: the non-œdematous and non-inflammatory swelling of the integument and all visible tissues.

The first description of the disease was by Gull in 1874 and in 1876. Ord gave a thorough exposition of its leading characteristics and proposed the name, because he declared mucin was found in all the tissues of its victims. Hammond gave a short description of the disease in 1881, and most of the treatises on general practice and nervous diseases written since 1834 have chapters on Myxœdema.

In July and August of 1886 the *American Journal of the Medical Sciences* published two papers by Drs. Hunn and Budden, giving thorough details of four cases under their care, and a careful review of the literature of the subject. Excluding the cases due to the surgical extirpation of the thyroid gland for disease, and those associated with idiocy and crotinism, there are one hundred and fifty-four cases of idiopathic Myxœdema more or less completely reported. They conclude there are more than three times as many females affected as males; the average for the beginning of the disease is forty years; the chief factors are excessive child-bearing, excessive hemorrhage, mental shock and worry, and injuries especially of the head. Myxœdema appears to manifest itself by very characteristic symptoms which affect especially the cutaneous, nervous and vascular systems.

CUTANEOUS SYSTEM.—The skin is swollen without pitting, dry, scaly and cold; the hair and teeth frequently fall out; nails become brittle, perspiration is either greatly dimin-

ished or absent. The mucous membranes are also swollen, but their secretion is usually increased.

NERVOUS SYSTEM.—There is mental sluggishness and impairment; insanity is frequent; in about half the cases sensibility is impaired; in all cases the muscles act feebly and sluggishly; the reflex actions are frequently diminished; speech is slow and sometimes hoarse; numbness and neuralgic pains are frequently present.

MUSCULAR SYSTEM.—In the majority of cases the pulse is slow and small, and the heart presents some abnormality. The blood is often in anaemic condition, and often there are severe hemorrhages. The surface temperature is subnormal, which may be considered in part a nervous symptom.

The lesions found in Myxœdema are nearly complete atrophy of the parenchyma of the thyroid gland, with a new formation of lymphatic tissue in the gland, with left-sided cardiac hypertrophy; a chronic diffuse nephritis; an interstitial hepatitis; a degeneration of the suprarenal capsules; an atrophy of the fat, and a general oedema or infiltration of the skin and mucous membranes. Drs. Hunn and Budden describe the results of study upon persons in whom the thyroid gland has been removed, congenitally absent or atrophied, and of animals whose glands have been extirpated in experimental inquiry, and in all cases has supervened a condition not distinguishable from Myxœdema, although known as "Cachexia Strumapriva." It is ascertained from other sources, however, that Myxœdema does not always follow the extirpation of the thyroid gland. Of Kocher's thirty cases eight escaped; of Reverdis' eleven cases six did not thus suffer, and Billroth has never had a case in many instances of removing the gland.

A clear, succinct, comprehensive statement of our present knowledge of this disease is found in the summary of Dr. Ord presented to the London Clinical Society as the chairman of the committee of the Society, in May, 1888. This summary in eighteen numbered paragraphs was published in the *London Lancet* June 2, 1888, and copied in the *Medical News*, Philadelphia, June 23d.

The author concludes this paper with the statements that he considers it a distinct disease with well-marked symptoms; that its diagnosis is easy and certain; that it is not amenable to treatment; and the persons affected with it never regain a perfectly normal condition. It seems quite possible to him,

however, to successfully meet associated disturbances which are harmful with medicine, and by appropriate regimen carry the victim along through years of comparative enjoyment and usefulness, to at last succumb to these causes of death.—*New England Medical Monthly.*

Insanity from Ulcer of the Stomach.

BY E. CHENERY, M.D., BOSTON.

DR. E. G. SPITZKA, of New York, has a most interesting article in the June 30th number of the *Medical and Surgical Reporter*, and one that will bear reading until it is committed to sane medical brains. It is entitled, "Abdominal Disease and Insanity."

Looking back over a third of a century in the practice, I can see instances where the knowledge contained in the article referred to would have been a lever to my feelings at least. I have seen several cases where I was sure the real cause of the insanity lay in bilious or other digestive derangements, but which were given over to the terrible mental results, under the idea that the mental state was insanity *per se*, and no proper medical treatment directed to the primary seat of the disease. It has been my fortune to rescue a number of females from the mad-house, by detecting and treating uterine disorders. But my purpose, next to calling attention to this valuable contribution, was to confirm his general position by a case which fell under my care many years ago.

A farmer of about thirty-five years old was being carried to the insane hospital when I first saw him. After some months he recovered his mind and returned home. A few months later he was taken away again, and so for some time. He was spare, pale, and not generally well. About three years from the time I first saw him I was called to see him, and found him suffering with acute diffuse peritonitis, of which he died a couple of days later. He was complaining of the usual pains of the disease, but told me that for several years he had had various periods of distress in the region of the stomach, especially after food, and with much tenderness of tissues. Occasionally the pain would be worse, and begin to shoot out and up until it reached his head, and then he would get out of his mind and not know what he

did. These were the times he was accounted crazy and sent to the hospital. After a while, probable under the system of dieting at the hospital, he would improve and get his discharge, to come back again under similar circumstances, which he did in the course of three years at least half a dozen times.

Before I opened his body I predicted that we should not find any trouble with his brain, but that we should find peritonitis caused by a perforation of the stomach or of the bowels close to it, which perforation was the result of a chronic ulcer, which had, by sympathy with the brain, unsettled his mind. Hence the insanity which recurred so many times was but a symptom of the real disease that had been neglected when he was sane and overshadowed by the greater symptoms of the mind when he was insane.

A perforation was found on the larger curvature of the stomach, about five inches from the pylorus, of about one-fourth inch in diameter and at the bottom of a gradually deepening ulcer about one inch and a-half in diameter at the mucous surface. Though I knew the person from the time I came to be a resident of the town, I regret that I never had a chance to inquire into his case before the fatal sickness. I do not know that any physician ever saw him till he reached the hospital, when his condition was such as to baffle the most careful alienist. I think the selectmen of the town, if not at first, at least subsequently, acted on their own judgment in sending him away. So, as it appears, nothing was done in striking at the root of his condition in treating the gastric ulcer. To me the case was plain enough when I was called professionally; but just how it would have appeared to me at an earlier period, in his sane spells, I do not know, yet I am inclined to think I should have found evidence to believe that there was permanent gastric trouble, and that the temporary insanity occurred in consequence of it—a happy belief for therapeutic guidance could it have been found.—*New England Medical Monthly.*

Seventh Decennial Convention for the Revision of the United States Pharmacopœia.

To the Editor of the Medical News of Philadelphia :

SIR: The Seventh Decennial Convention for the Revision of the United States Pharmacopœia convened here at

twelve o'clock on Wednesday, May 7th, with the President, Robert Amory, M.D., of Boston, in the chair.

Immediately on coming to order the President announced the names of those who would form the Committee on Credentials, and this committee was instructed to report at the opening of the afternoon session. Having finished this business the Convention adjourned, and after forming in line, proceeded to the White House, where they were received by President Harrison.

At the opening of the afternoon meeting the delegates from the various medical and pharmaceutical colleges, and from the medical and pharmaceutical associations, were instructed to nominate one member from each delegation, in order that a Nominating Committee for the officers during the coming ten years and for the remainder of the session might be chosen. The rest of the business of this session was of no importance. The Convention adjourned at a little after four o'clock.

In the evening the Nominating Committee, consisting of nearly one hundred members, met in the committee room at the Arlington Hotel and proceeded at once to the nomination of the proper officers—Dr. Wood, of South Carolina, being chosen Chairman. After a small amount of preliminary business the Committee unanimously elected Dr. H. C. Wood, of the University of Pennsylvania, as President of the Convention, and then nominated five Vice-Presidents, rather than two, as has heretofore been the custom. The following gentlemen were nominated: First Vice-President, W. S. Thompson, Washington, D. C.; Second Vice-President, D. W. Prentiss, Washington, D. C.; Third Vice-President, Dr. J. M. Flint, United States Navy; Fourth Vice-President, A. E. Ebert, Chicago; Fifth Vice-President, Wm. M. Searby, San Francisco. The result of the ballot for the nomination of Secretary resulted in the election of Dr. H. A. Hare, of Philadelphia, as Secretary, and Mr. G. H. Charles, of St. Louis, as Assistant Secretary. From ten o'clock until half-past two in the morning, the time of the Committee was consumed in the nomination of the Committee of Revision, which eventually was made up in the following manner: Dr. Charles Rice, Chairman, New York; Joseph P. Remington, First Vice-Chairman, Philadelphia; Dr. Robert T. Edes, Second Vice-Chairman, Washington; Dr. C. O. Curtman, Third Vice-Chairman, Missouri; Dr. J. M. Flint, United States Navy, Treasurer;

Dr. Roberts Bartholow, Philadelphia; P. W. Bedford, New York; Dr. F. A. Castle, New York; Dr. N. S. Davis, Jr., Illinois; C. Lewis Diehl, Kentucky; Dr. R. G. Eccles, New York; Dr. John Godfrey, U. S. M. H. Service; Dr. W. G. Gregory, New York; C. S. N. Hallberg, Illinois; John M. Maisch, Philadelphia; G. F. H. Markoe, Massachusetts; Dr. W. M. Mew, United States Army; Dr. Chas. Mohr, Alabama; Oscar Oldberg, Illinois; Frank B. Pawer, Wisconsin; Dr. H. H. Rusby, New York; L. E. Sayre, Kansas; A. B. Taylor, Philadelphia; Dr. O. A. Wall, Missouri; Dr. H. C. Wood, Philadelphia; Dr. T. E. Wood, North Carolina.

Immediately upon the opening of the morning session on Thursday the Committee on Nomination made its report, and the nominees were elected by the Convention by acclamation, the President and Secretary at once taking their places upon the platform. During the remaining portion of Thursday the time was occupied in the discussion of the thirteen recommendations made by the Committee appointed in 1880, with the result that they were all adopted with almost no changes or amendments, with the exception of three of them which dealt largely with the standardization of drugs, and which were referred, after a considerable amount of discussion, to the Revision Committee, which had just been appointed; it being agreed that the entire question of standardization should be left to the judgment of this representative body. One section which dealt with the question of the use of "parts by weight" and the metric system, was laid upon the table and made the special order of business for Friday morning at ten o'clock, and Professor Mendenhall, of the Coast Geodetic Survey, was requested to address the Convention in regard to the advisability of adopting the metric system in pharmacy. After appointing a committee of seven members to consider the manner in which delegates should be elected to the Convention of 1900, the Convention adjourned.

On Friday morning Professor Mendenhall delivered a very interesting address, partly historical in its character, dealing largely with the importance of the introduction of the metric system and its recognition as the standard of weights and measures by all learned bodies. The interesting statement was made that while certain States of the Union had passed exceedingly stringent laws for the punishment of adulteration and for the purpose of preventing short weights and

measures, they had not yet passed any law stating what the standard weights and measures are, which is rather an anomalous condition of affairs. After a discussion the Convention unanimously agreed to recommend the adoption of the metric system, and referred the question as to the use of parts by weight to the Committee of Revision. At the same time the meeting let it be distinctly understood that the preference of the Convention was for the older method, and favored the abolition of the method in vogue during the past ten years.

In view of the enormous amount of work which had been accomplished by the Committee of Revision of 1880, it was the universal desire of all the delegates that the members of that Committee should at least receive some small amount of money, which would be more in way of an honorarium than a recompense. Unfortunately the amount of money in the treasury did not permit this; but it was moved, seconded, and unanimously carried by the Convention that the incoming Treasurer should be instructed to pay to the Chairman of the Committee of 1880 the sum of \$1,000, as an evidence of the recognition of his services. Dr. Rice generously refused to accept the gift, but his refusal was immediately voted down, and the Convention insisted upon his acceptance of the amount, which Dr. Rice immediately announced he would return to the Treasurer as soon as it was received.

Two facts of great importance were also decided before adjournment. One was that the Committee should be instructed to publish and copyright the Pharmacopœia themselves, and to sell it at a nominal figure, only a sufficient amount being made to enable the Committee to carry out such scientific investigations as were thought desirable. Several times during the meeting a movement was started looking to the prevention of quotations from the United States Pharmacopœia by commentaries. This movement consisted in one instance in an absolute refusal to permit of such quotation, and in another of taxing the National and United States Dispensatories the sum of five thousand dollars each for the privilege of quoting from the standard book. Both of these movements were defeated, and at no time were popular in their character, the Convention readily recognizing the fact that the Pharmacopœia is published not for the purpose of making money, but of affording a standard to which the medical and pharmaceutical professions may refer when they so desire. It is interesting to note

that the number of copies of the Revision of 1880 which have been sold during the past ten years amounts to over seventeen thousand, the proceeds of which went toward the enriching of a publishing house rather than the furtherance of scientific research. In view of these facts, it is evident that the instructions given to the Revision Committee in regard to publication by the Convention, which has just adjourned, are very much wiser than those of the Convention of 1880.

Veratrum and Digitalis in Pneumonia.

PROF. H. C. WOOD, in the course of a clinical lecture, spoke of the treatment of pneumonia to the following effect: "We are called to a case of pneumonia in the height of the disease. The patient has high fever and a full, bounding, strong pulse. We notice also that the lower lobe of the left lung is full of blood. What has brought the flux of blood to that point? There has been everywhere in that lobe a dilatation of capillaries, the effect of a relaxation of pressure. The heart being excited, and the arterial pressure being increased, these relaxed dilated vessels draw the blood into them, the whole lobe becomes full of blood, while the arterial or capillary system is everywhere contracted except in this lobe. Under such circumstances veratrum is to be used. In the first place it depresses and quiets the heart; it reduces the arterial pressure, and drives the blood into the territory where resistance to blood entrance is slight. But it does more than this: it builds up the capillaries all through the system. When under the influence of veratrum the heart has been lowered in power, and the whole circulation in the abdominal cavity has been opened wide, there is a great suction of blood away from the lung. The congestion has been reduced, and possibly the force of the disease has been limited. But by and by a time comes when a half, or a third, or perhaps the whole of one lung is consolidated. Under these circumstances the right side of the heart is placed under a perpetual strain, and the strain keeps on increasing. By and by the pressure is all on the right side of the heart, and the patient dies. Under these circumstances of failure of the right heart to do its work efficiently, a full dose of digitalis is to be given and repeated at intervals. The effect will be that the right side of the heart will begin to beat slowly and with

long pauses, and the balance of the circulation will be restored. No other remedy does this so well as digitalis; it is more powerful than any other, but slow in its action. It is essential that the digitalis should be given with a free hand.—*Med. News* (Philadelphia), *Pract. St. Louis Clinique*.

Genito-Urinary and Orthopedic Notes.

BY JOS. L. BAUER, M. D.

URETHRAL CHANCRON.

SOME few weeks since, my friend, Dr. W. W. Vaughan, referred a case to my clinic of urethral chancroid involving the first anterior inch of the urethra and expending its virulence chiefly upon the fossa navicularis. The diagnosis was rendered easy by the characteristic appearance of the ulcer, the discharge and the inflammatory induration. Having had satisfactory experience with carbolic acid as a preliminary local measure, I suggested the use of campho-phenique (the latter contains about fifty per cent. of carbolic acid). In order to apply it thoroughly, a urethral dilator would be required. To promote the healing of the ulcer, calomel was to be dusted over it. To prevent an almost unavoidable complication, stricture of the anterior inch of the urethra, I advised the introduction of a two-inch piece of gum elastic catheter, No. 25 F., this to be fixed securely in the usual way, and the distal opening to be plugged with a piece of cork, the plug to be removed upon urination.

I have learned since then, that this plan of action has resulted in great benefit. Experience covering up to date about twelve cases, has taught me that *continuous dilatation* offers the best assurance of a successful result as far as the permeability of the urethra and the removal of cicatricial tissue is concerned.

A CASE OF TRUE SPERMATORRHOEA.

During the month of January my colleague and friend, Dr. A. S. Barnes, referred a young man to me, aet. 19, six feet four inches tall and apparently well nourished, though the tissues seemed flabby. I could see at a glance that mental hebetude was a prominent factor in his case. A laggard gait, sharp cut features, sunken eyes, determined the

existence of a sexual neurosis of an anaesthetic type. Upon inquiry I ascertained that he had been a masturbator (excessive); and that since he ceased, five months previously, diurnal and nocturnal emissions ensued. These occurred immediately after urination in a distinct ejaculation, and produced marked mental depression. The urine also contained semen in goodly quantities, as verified by microscopic examination conducted by my friend Dr. Ohmann-Dumesnil. The patient had no recollection of nocturnal attacks, though his linen presented confirmatory evidence. The patient was impotent, not the faintest erection having been realized. No sexual sensation accompanied these emissions. The prepuce and glans penis were anaesthetic, as also was the entire urethral tract. Nor was there the usual sensitiveness around the veru-montanum. There was evidently an absence of the necessary centripetal nerve force in order to evoke the physiological centrifugal response. *No stricture anywhere;* bougie a boule of various sizes introduced. The necessity of stimulating the ganglionic bundles in the neighborhood of the caput gallinaginis prompted the deep injection of fifteen grains of argenti nitrat. to the ounce of water. Though it caused considerable irritation, even inflammation, the result was a negative one. Galvanism, ascending and descending currents, negative pole in the urethra, resulted similarly. I then resorted to internal medication in combination with above. Faradization in connection with massage of the entire back next suggested itself and was carried out. The negative pole was represented by the urethral electrode in the urethra and the positive was carried up and down the spine. Occasionally the currents were alternated. This treatment soon yielded beneficent results in diminishing the frequency of the emissions, as also re-establishing some virile strength.

CERREBRAESTHENIC NEURASTHENIA.

Whilst upon the subject of sexual neuroses, I recall a case in which irritative phenomena seemed to be prominent. Though there was some evidence of urethral localization, there was not enough to determine local treatment. This patient had passed through "the mills of the gods," out of which were ground malaria, syphilis, and what not! I made a diagnosis of cerebraesthetic neurasthenia, and advised hot baths, massage, frictions, galvanism, bromides, iodide of potash, zinc preparations, chloride of gold and nitro-glyc-

erine. Nothing availed. One morning he informed me that his wife had casually remarked, that almost every night he would turn on his belly and go through the movements of sexual intercourse, and seemingly when satisfied would turn on his side or back. This might occur several times during the night. He was slightly impotent.

A urethral examination revealed no stricture, though some hyperæsthesia, (deep). Not being satisfied, I sent the patient to Dr. L. Bremer for consultation. He concurred with me, and suggested the administration of iodide of sodium, and some of the other media which I had already applied. The persistent use of galvanism, nitro-glycerine and sodium iodide soon improved him.

POTT'S PARAPLEGIA.

The last meeting of the orthopedic section of the New York Academy of Medicine was interested in the subject of paraplegia of Pott's-disease, and some difference of opinion existed as to its proper treatment. Dr. LeRoy D. Hubbard presented the report of a case of Pott's paraplegia, wherein the suspension treatment (after Motchoukowski) yielded some result. The difference of opinion rested upon the ætiology of the paraplegia, the question of pressure on spinal cord, transverse myelitis, pressure on anterior or posterior nerve roots in their passage through the foramina and reflex causes being considered. The participants seemed to have left pacchy-meningitis out of the question.

We are constrained to doubt the efficacy of daily suspensions. Pott's paraplegia is simply an incident of disintegration of the vertebræ, and will persist as long as reflex and direct causes remain. These will certainly continue if mobility of the affected structures is permitted. Dr. Ridlon found the key to the situation, when he suggested an immobile recumbency. At best suspension *has not done much* for locomotor ataxia, and there is no doubt that its effects in gibbus are simply to correct abnormal posture and immobilize diseased foci. As far as elongation or extension is concerned, it may be asserted without much fear of contradiction, that this *concerns* the spine, above or below the gibbus, most frequently below, occasionally above, rarely the gibbus itself, (Anders).

Weir Mitchell, in an article on the same subject, contends that the favorable influence of suspension is not *alone due*

to the modification of the deformity, but also to extension of the spinal cord.

Dr. Hans Schmaus has just published a pathologico-histological and experimental study of compression myelitis as a result of vertebral caries. A review of the same is published in the *Berl. Klin. Wochensch.*, No. 14, April 7, 1890, from which we glean the following: The author cites eight cases of compression myelitis, and adds his experiments upon animals. Of the latter, six were with tuberculosis, six with pyococci, one with a sterilized culture of staphylococcus, and two with ammoniac. Excluding direct contusion or bruising of the cord as a result of dislocation of the vertebrae, etc., degeneration of the cord in the course of a vertebral caries, is due to oedema, the persistence of which produces diffuse softening. In rare cases, only, is typical myelitis due to the progress of the pathological (vertebræ) process inwards. As a rule, pachymeningitis occurs, often a meningitis. Myelitis can be assumed, when the pathological process in the cord partakes of the character of the external inflammation preceding it; tubercular caries, when typical tubercle of the cord ensues. All other inflammatory processes occurring herewith are the result of a reactive inflammation following softening, and which may terminate in sclerosis. It is analogous to the inflammation occurring upon the resorption of infarcts.

The oedema suggested may be the result of stasis, or inflammation, but chiefly a combination of both. The collateral oedema may be referred to the effect of ptomaines; an analogous condition can be produced by chemical substances.

Anaemic and embolic softening are of little importance.

The occurrence of typical myelitis is due to the rapid diffusion of the process. Oedema of the cord always precedes the myelitis. Recovery of cases of vertebral caries, in which the cord is implicated, is due to the retrogression of the oedema.

THE CONDITION OF THE GASTRIC JUICE AND THE STOMACH IN DIABETES MELLITUS.

Professor Rosenstein, of Leyden, discusses this subject in the *Berl. Klin. Wochensch.*, No. 13, and reaches the following conclusions:

I. In a series of cases of diabetes mellitus, free muriatic acid was absent from the gastric juice for a longer or

shorter time; this to be considered as the expression of a gastric neurosis.

2. In a number of cases of diabetes, diffuse atrophy of the gastric mucous membrane ensued as a consequence of interstitial gastritis.

3. Where free muriatic acid is continuously absent from the gastric juice, the reason must be sought in an atrophy of the glandular structure dependent upon interstitial gastritis.

4. The diabetic secretion neuroses of the stomach, as also the absence of the patellar reflex, is not in proportion to the gravity of the case, the quantity of saccharine loss or the presence of acetone or diacetic acid.

BONE ABSCESS.

Dr. Jordan Lloyd, F. R. C. S., M.D., contributes an interesting series of observations on abscess in bone, in which he reaches the following conclusions: "I would remind you that the majority of destructive joint diseases have their origin in the neighboring bones. Many of the above cases are illustrative of this fact, so that as a prophylactic to joint disease, the early treatment of bone abscess is a measure of great importance. The safety of such operations and the rapid recovery which follows them, are the outcome of the teachings of the great founder of the principles of surgical cleanliness." (*Provincial Med. Jour.*)

NOTE: If the author had referred his encomium to the doctrine that intra-osseous tension from whatever cause must be removed, we could endorse it. Surgical cleanliness may facilitate recovery, but it certainly does not relieve an osteomyelitis or suppurative focus. The doctrine of surgical tension is not sufficiently appreciated, though Mr. Bryant has repeatedly directed our attention to its importance. An early relief of intra-osseous or intra-articular tension would diminish the number of our bone and joint-resections.

Do Not WASTE ALCOHOL.—The alcohol used in washing sections, and many other operations, should not be thrown away, but placed in a bottle labeled "old alcohol," and used in the alcohol lamp for washing.

Microscopy.

Microscopical Laboratory Notes.

BY H. M. WHELPLEY, M.D., PH. G., F. R. M. S.

Read before the St. Louis Club of Microscopists. Reported for the CINCINNATI MEDICAL NEWS.

DISSECTING KNIVES.—The delicate blades of small dissecting knives are liable to become injured, if the instruments are not carefully cared for when not in use. I find that a small piece of thick blotting paper can be slipped over the blade like a sheath to a sword. If the blade is dipped in vaseline before putting it away, there is no danger from rust.

GOLD SIZE.—The works on Microscopy give complicated and tedious methods for making gold size from linseed oil (*oleum lini*). It is entirely unnecessary to follow them, as the article can be purchased from varnish dealers at fifty cents per pint. It is known as "gold size varnish." It costs more than this to make it by boiling linseed oil with litharge, or passing oxygen through the oil, as one ingenious writer suggests. Gold size can be used as a cement as it is, but I prefer to add about one-fourth the bulk of benzol to thin it, so that it flows more smoothly from the brush.

A VALUABLE LAMP.—I have tried numerous kinds of lamps to find the one most suitable for general use. The most serviceable one seems to be a Pinafore burner and chimney on a large bracket bowl that is supplied with a handle and an opening for filling the lamp. When arranged with a large white shade the outfit costs \$1.15, and is much more useful than the expensive student's lamps, or special ones made for microscopists. If the light is too low for some work, it can be easily raised by placing the lamp on a cigar box or blocks of wood.

BRUNSWICK BLACK.—Of late this cement has been made by replacing the oil of turpentine with benzol, which makes a smoother cement and causes it to dry more quickly. It also makes it much more expensive. I find that the rectified oil of turpentine answers nearly the same purpose as the benzol and is not so expensive. It is also necessary to

use the true Trinidad asphaltum, and not the ordinary kind that is made into street pavements. I make the cement by dissolving Trinidad asphaltum in rectified oil of turpentine until of the proper consistency, and then straining through muslin. To this add nut oil in the proportion of five minims to the fluid ounce of cement.

San Francisco Microscopical Society.

Reported for the MEDICAL NEWS by Wm. E. Loy, Recording Secretary.

The regular fortnightly meeting of the San Francisco Microscopical Society was held at its rooms, 120 Sutter Street, April 23, with President Wickson in the chair.

A communication from Professor Hanks was read, which stated that on the 4th of June, 1870, the San Francisco Microscopical Society was organized; therefore, on the 4th of June, now near at hand, this venerable Society will have attained the age of twenty years. It was deemed advisable to make the occasion one of special interest, and the President appointed a Committee of Arrangements.

A communication on the subject of a new flash-light for photographing was read by the Corresponding Secretary. This was a memorandum from the proceedings of the Washington Chemical Society, before which Dr. Thomas Taylor, of the Department of Agriculture, made the exhibition of his new discovery, which, it is believed, will supersede several now in use for photographing at night. The composition consists largely of charcoal made from the silky down of the milk weed—a form of carbon which he prefers to all others, because of its freedom from ash. A few grains being placed on tissue paper and ignited by a punk match produced a prompt and blinding flash, while it was observed that the paper on which the powder rested was not even scorched, thus demonstrating the greater security from accidents.

Mr. Breckenfeld thought it probable this new discovery would prove of value in photographing infusoria and other living minute organisms with the aid of the microscope.

The event of the evening was the exhibition of a splendid series of photo-micrographs and appropriate remarks by E. W. Runyon. The speaker described his method of procedure in detail, and to further illustrate his topics had his apparatus on exhibition. For the purpose he used his Bul-

loch stand, the tube in a horizontal position, the eye-piece entering a camera made especially for the purpose. The tube should be lined with velvet, or blackened, and in focusing a hand-magnifying glass was used behind the ground glass, to secure sharp definition. All the photo-micrographs exhibited by Mr. Runyon were made at night with oil light.

The addition to a sensitive film of certain coloring matters, said the speaker, which are known as optical sensitizers or selective sensitizers, renders the film sensitive to rays which would otherwise produce little or no photographic effect. The discovery was made by Vogel in 1873. The rays to which the film is thus made sensitive are rays which would not absorb under ordinary conditions, but which it can absorb after treatment with the dye. The dyes used are of the eosin group. Eosin sensitizes for green and yellowish green, and erythrosin for yellowish green and greenish yellow. For photographing many microscopic preparations, such as stained sections of animal and vegetable tissues, the orthochromatic plates had given excellent results.

With a three-inch objective, the exposure, even with the light of a student lamp only, should be very brief—practically instantaneous; with a one-fourth or one-fifth-inch objective, a longer exposure must be had, the duration of which would depend largely on the nature of the object to be photographed.

Particular attention was directed to the photo-micrograph of a vertical section of the human scalp, showing with great clearness the hair follicles, fat cells, glands, etc.; and as examples of fine details the head of horse-fly, proboscis of blow-fly and arranged diatoms.

The assistance of photography in the investigation of minute structure is of great importance, as it reduces more nearly to a mathematical plane the portion viewed. It also confirms the results obtained in the resolution of difficult tests.

The speaker said that with some experience one could finish four or five negatives in an evening, and that such expedition ought to satisfy the most exacting.

As a means of increasing the excretion of uric acid, salicylate of soda has thirteen times the power of salicine; while salol occupies an intermediate place.

Gleanings.

DISINFECTION BY SULPHUR.—*The Journal of the A. M. A.* for February 8th calls attention in its editorial columns to a circular recently issued by the Kentucky State Board of Health in which are given rules for the proper use of sulphur fumigations. It is most essential that moisture be present at the time the sulphur dioxide is formed, as this latter may then unite with the hydrogen to form sulphurous acid, with the liberation of nascent oxygen. This may be attained by *thoroughly dampening the floor, walls and furniture.* For a room ten feet square use three pounds of sulphur, moistened with alcohol in an iron pan placed in water.

—*Medic. Mirror.*

THE IMPORTANCE OF THE PRACTICE OF WASHING OUT THE PERITONEAL CAVITY AS A MEANS OF SECURING A NATURAL DISPOSITION OF THE INTESTINES AFTER ABDOMINAL SECTION.—Malcolm, in a short but suggestive paper, again calls attention to the great danger which may result to the patient after laparotomy from simple paralysis of the bowel, though peritonitis may be entirely absent. Raw peritoneal surfaces are very apt to unite, even if they are entirely healthy. It is impossible after a laparotomy to arrange the coils of intestine in such a position that they will not at some time become adherent. In sponging they are very apt to be disturbed and thrown into unnatural relations. By irrigating the cavity we cause the intestines to float upward and thus undo any twists that may be formed. Now if the fluid is sucked out of the cavity, instead of being withdrawn with sponges, they will settle down in their natural positions just the same as when ascitic fluid is evacuated. Persistent vomiting after laparotomy seems to be beneficial rather than otherwise, since by pressure of the diaphragm and abdominal muscles the bowels are rearranged, as it were, and made to assume their normal relations. The important point to be borne in mind is that it is not so much the fact that the intestines contract adhesions to adjacent parts which give rise to subsequent persistent pain or obstruction, as it is that they become adherent in unnatural positions.—*American Journal of Medical Science.*

THE ANTISEPSIS OF THE RENAL PASSAGES BY THE INTERNAL USE OF SALOL.—In the intestinal tube, says the *Therapeutic Gazette*, February 15, 1890, as a consequence of the action of the pancreatic juice, salol splits up into carbolic and salicylic acids, which are then eliminated by the kidneys, carbolic acid without being changed, salicylic acid after combining with sodium. Investigations by Nencki, Sahli and Lépine have proved the truth of this statement beyond contradiction, and these writers have, as a consequence, recommended its internal use in "internal disinfection" in cholera, typhoid fever, and bacterial diseases. Dr. Dreyfuss (*Wiener Medizinische Blätter*, December 19, 1889), bearing these facts in mind, has recommended its use internally as a means of inducing the passage of an antiseptic fluid, through the kidneys, ureters, bladder and urethra; and claims that it acts in a much more intense manner and covers a wider field than can be accomplished through an injection of antiseptic fluid. Sahli further has shown that the urine of patients who have taken salol internally is aseptic, and that salol in large doses is well borne and never produces tonic symptoms. It is, therefore, quite as suitable for producing antisepsis in the urinary passages as naphthol is for the antisepsis of the intestinal tract: Dreyfuss has employed salol, either alone or in composition with various balsamics, in blennorrhœa, the full dose varying from seventy-five to one hundred and twenty grains. Even in acute cases, treated at the very outset, the mode of treatment rapidly diminished the secretion, and in some few cases arrested it within a few days. Its effects are especially marked in combination with the use of cubebs or copaiba.

Finally, Dreyfuss recommends this use of salol in operations upon the urinary organs; for in this way the urine is kept aseptic, and the source of danger is thus avoided.—*American Practitioner and News.*

EXTIRPATIONS OF THE THYROID GLAND.—Dr. D. G. Zesas reports fifty cases of extirpation of the thyroid gland from the clinic of Professor Niehaus, of Bern. Of the patients, thirty-four were females and sixteen males. Only one death occurred from catarrhal pneumonia; the remaining cases recovered, healing taking place in forty by primary union. In forty-four cases enucleation was performed and in sixteen cases partial strumectomy. The success of the

former operation depends upon accurately determining the exact boundaries between the healthy and diseased parts, as otherwise profuse haemorrhage is apt to occur and obscure the field of operation. To control bleeding, temporary occlusion of the vessels with forceps as advised by Hahn was found very effective. Owing to the fact that small abscesses were observed from the use of silk sutures, catgut was employed, which had been sterilized and treated with iodide of mercury.—*Archiv. fur Klin. Chirurgie.*

THE REMOVAL OF WARTS BY ELECTROLYSIS.—Dr. Patrzek (*Internat. Klin. Rundschau*) introduces the needle electrodes through the base of the wart in such a manner that they emerge on the opposite sides, without coming in contact. During the passage of the current the wart is kept moist with a lukewarm salt solution. The wart becomes white, pale, then blackish and soft in the course of two to five minutes, when the needles are withdrawn. After the operation the wart shrivels up, and falls off in form of a hard, black body, under which the skin is slightly reddened.—*Prager Medicinische Wochenschrift.*

THE TIME FOR SURGICAL INTERFERENCE IN ACUTE INTESTINAL OBSTRUCTION.—In the paper on intestinal obstruction Dr. Keene insists on the necessity for earlier surgical interference than has usually been practiced, especially in country districts. Dr. Richardson (*British Medical Journal*) summarizes his views on this subject as follows:

1. In all cases the use of milder measures, such as purgatives, enemata and massage, may be safely carried out until the supervention of faecal vomiting.
2. As soon as this is established an exploratory incision into the abdomen should be made without delay.
3. Obscurity of diagnosis in presence of this symptom ought not to stand in the way of an operation.
4. Clinical experience has taught that there is very little chance of recovery when once stercoraceous vomiting has begun, unless an operation be performed.
5. Symptoms of collapse are not a contra-indication to operative interference.—*Canada Lancet.*

TREATMENT OF HIP-JOINT DISEASE.—Dr. John Ridlon states that the results of the use of the traction hip-splint are not any better than, or as good as, those obtained by any purely fixative apparatus; nor does it appear that the results were any better than those where the "expectant

treatment" or no treatment has been employed; nor has it been shown that the use of the traction splint shortens the disease. On the other hand, statistics have shown that it does *not* prevent actual shortening from arrested growth, from erosion of bone, and from subluxation; that it does not prevent stiffness at the joint. It has also been shown to cause in-knee and super-extension at the knee by stretching the ligaments, and weakness and talipes equinus at the ankle.—*N. Y. Medical Journal.*

PRESERVATION OF CAT-GUT LIGATURES.—Professor Gross is not at all in favor of carbolized oil as a preservative of cat-gut ligatures, claiming that it merely forms a nidus for germs. He recommends putting the animal ligature in a weak chromic acid solution and glycerine for about a week, and then placing in the following mixture until needed.

R.—Alcohol	part 15.
Glycerine,	part 1.
Acid carbolic,	10 p. c.

M.

The placing of the cat-gut in a 1-1000 corrosive sublimate solution, just before using, makes it soft and pliable.

HYDROPHOBIA IN PARIS.—In the first five months of 1888 there were two hundred and eighty applicants at M. Pasteur's laboratory from the department of the Seine alone, all of whom had been bitten by dogs either known to be rabid or suspected of being so. This number is almost equal to the corresponding total for the whole year of 1887, which amounted to three hundred and six. The Prefect of Police has, therefore, issued an order that for six weeks no dog shall be allowed to go about the streets of Paris, unless led by a string.

SUPERNUMERARY BREASTS.—J. H. Darey, M.D. (*Montreal Med. Jour.*), reports a case of two supernumerary breasts, one in each axilla. During pregnancy these breasts would enlarge considerably, and secrete milk quite freely. Both extra breasts were destitute of a nipple, the ducts opening directly into the areola. The secretion of milk in such an awkward place caused the woman much annoyance. She had discovered, however, a method of drying up the milk after the birth of the child. It was the constant application, for several days, of cloths wrung out of a hot solution of salt.

HEALING OF WOUNDS WITHOUT DRAINAGE.—Dr. L. Hektoen reports eleven cases of major operations, chiefly resections and amputations, treated successfully without drainage. In these cases the field of operation was rendered thoroughly aseptic by scrubbing with soap and water, shaving, washing with ether or alcohol and then with sublimate solution. Whenever possible this was done a day or two beforehand, and a wet dressing applied, to be removed immediately before commencing to operate. During the course of the operation rigorous antisepsis was always observed; pieces of bichloride gauze were used for sponging and bichloride solution for irrigating; careful haemostasis was practiced before closing the wound, which was done as accurately and tightly as possible without strangulation, so as to avoid the formation of any dead spaces. Silk rendered aseptic by boiling in water and preserved in alcohol was used for ligatures and sutures. Finally a copious antiseptic dressing was applied, exerting quite firm and uniform pressure.—*Gaillard's Medical Journal.*

Book Notices.

THE PHYSICIAN'S LEISURE LIBRARY.

Education and Culture as Related to the Health and Diseases of Women. By Alex. J. C. Skene, M.D. Paper. Pp. 127. Detroit: Geo. S. Davis.

DIABETES MELLITUS AND INSIPIDUS. By Andrew H. Smith, M.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School, Physician to Presbyterian Hospital. Paper. Pp. 74.

The two works, whose titles we give above, belong to the series known as the Physician's Leisure Library. Mr. George S. Davis, the publisher, believing that short, practical treatises, prepared by well-known authors, containing the gist of what they had to say regarding the treatment of diseases commonly met with, and of which they had made a special study, sold at a small price, would be welcomed by the majority of the profession, has arranged for the publication of such a series, calling it by the name we have mentioned, and selling each volume at the low price of 25 cents.

We give above the titles of the late issues of the Physician's Leisure Library. They are both interesting, practical works by eminent medical writers, and worthy of attentive study by physicians.

A DESCRIPTION OF THE WESTERN RESORTS FOR HEALTH AND PLEASURE reached via Union Pacific Railroad System. "The Overland Route." Third Edition.

We are indebted to Mr. E. L. Lomax, General Passenger Agent, Union Pacific System, Omaha, Neb., for this beautiful work, printed on heavy, white super-calendered paper. It is furnished with a number of maps, and is illustrated by very many beautiful engravings, depicting places of great interest and of renown on account of their grandeur or some remarkable feature. Among a few places that are pictured is Devil's Slide; Weber Canyon, Utah; Cliffs of Gunnison Island, Great Salt Lake; Pelican Bay; Great Shoshone Falls; Pillars of Hercules, Oregon; Giant's Tea Kettle; Este's Dome; The Loop above Georgetown, Col.; Gray's Peak, many points in Yellow Stone Park, etc., etc.

The Union Pacific is the great National highway, and forms a part of the first trans-continental line of railroad from ocean to ocean. It was conceived and its construction authorized, as a war measure, the needs of the Government during the War of the Rebellion having clearly shown the necessity for it.

Years have demonstrated that this grand road was most wisely and skillfully planned. There is no other line to-day possessing its peculiar advantages, and there never can be a railway constructed across the continent like it, for the simple reason that the Union Pacific occupies the very best belt of country obtainable. There is immunity, on the one hand, from the blazing suns and stifling alkali dust of the southern deserts; and, on the other, the lightest possible snow-fall to be encountered on the mountain summits. It is the natural highway either for summer or winter, spring or autumn, and it must forever remain so. No amount of specious reasoning can shake the solid fact, that the Union Pacific line is the one railway across the continent unassailable by summer heat or winter storms."

Every physician should endeavor to secure a copy of this *Description of the Western Resorts for Health and Pleasure Reached via the Union Pacific Railroad*. We presume this

can be done by addressing Mr. E. L. Lomax, Omaha. Besides the useful information it contains as regards the Health Resorts of the West to which medical gentlemen might wish to send such of their patients as seem to need change of scene and climate, there will be found in it much that will interest in the way of descriptions of a far distant part of our country that, until recently, was inhabited only by savages, and was the roaming ground of thousands of buffaloes.

PHYSICIANS' AND STUDENTS' READY REFERENCE SERIES.

Electricity in the Diseases of Women, with Special Reference to the Application of Strong Currents. By G. Betton Massey, M. D., Physician to the Gynecological Department of Howard Hospital; Late Electro-Therapeutist to the Philadelphia Orthopedic Hospital, etc. Second Edition. Revised and Enlarged. 12mo. Pp. 240. Cloth. Philadelphia: F. A. Davis. Cincinnati: Alfred Warren. Price, \$1.50.

The preparation of this work probably constituted the first attempt to issue a complete treatise on the electrical treatment of the diseases of women. But in offering it to the profession the author states that he does not wish to assume the position of recommending a routine use of any one agent or procedure, to the exclusion of other rational remedies, in the medical or surgical treatment of any single class of diseases.

As the work has reached the second edition, it is evident that it has been well received by the profession. If it had not been recognized to possess merit, it would have passed out of print with the exhaustion of the first edition, if the publisher had been so fortunate as to have disposed of all the copies that composed that edition.

To illustrate the effects of electrical treatment in diseases of women, we will copy at random the report of a case of menorrhagia of five months' duration treated by it—a cure having been accomplished by the use of three positive cauterizations:

"Agnes Sharp; married, aged twenty-two years. No children; one abortion. Five months ago, while lifting a heavy tool-chest, became sick and aborted a six weeks' fetus. Since then menstruates every three weeks, losing a large quantity of blood for four days, accompanied by much pain. Has a constant leucorrheal flow of large amount,

white and tenacious, attended with pain in left ovarian region. Examination reveals uterus small, position normal, os small, vaginal surface healthy; sound enters two and a half inches and reveal; a tender fundus.

"September 8. Positive cauterization, forty milliamperes, four minutes.

"September 20. Positive cauterization, forty milliamperes, four minutes. There has been no pain since the day after first treatment.

"September 21. Slight brownish discharge on the day after last application. To-day is feeling well. No treatment used.

"September 25. Felt well until yesterday, when she had some pain. Positive cauterization, forty milliamperes, four minutes.

"October 9. Menstruation appeared October 1st, lasting four days, with lessened pain. Is now free from any discharge. No treatment.

"November 1. Menstruation appeared October 28th, lasting three days. Is entirely well."

In the second edition there has been a revision of most of the text. Four chapters have been almost entirely rewritten.

In the "Introduction" the author explains the laws of electricity, as applied to this branch of medicine and surgery, in so practical a shape that the student is made to comprehend current proportions as he would after prolonged mathematical study. The general practitioner will find it useful and interesting.

HOW TO PRESERVE HEALTH. By Louis Barkan, M.D. 12mo. Pp. 344. Paper. New York: American News Co. Price, \$1.00.

This work has been prepared, not for the use of physicians, but to instruct the masses in the principles of hygiene, so that, understanding the laws of health, by a proper observance of them, they may maintain in their normal conditions their minds and their bodies. Good health conduces to soundness of mind; and both of these existing in an individual tend to produce integrity of morals—at least, they afford a bulwark for resisting temptation.

Dr. Fordyce Barker, of Bellevue Medical College, in speaking of the work, says: "I wish it could be in the hands of every intelligent head of a family and in the library

of every school, for I think it would popularize a vast amount of important and useful knowledge, and thus be of great service to the community. I am particularly pleased with one feature of it: that it does not profess to teach dosing and drugging, which our anxious grandmothers and others lacking the requisite elementary knowledge are too prone to indulge in, and oftentimes do great harm thereby."

Physicians who take an active interest in the health and happiness of the families of their patrons will do well to recommend to them the study of this work. They will do good by doing so.

STORIES OF A COUNTRY DOCTOR. By Willis P. King, M.D., Member of the American Medical Association; Ex-President of the Missouri State Medical Association; Professor of the Diseases of Women in the Medical Department of the University of Kansas City, etc. With Illustrations by T. A. Fitzgerald. 8vo. Pp. 400. Cloth. Kansas City, Mo.: Robert E. King, 1333 Jefferson Street. Price \$2.50, postage prepaid. "Stories of a Country Doctor" is a book containing twenty chapters, printed in large, plain type, on heavy, supercalendered paper, bound in silk cloth, embossed in ink and gold, with seventy-two illustrations (photo-engravings) by T. A. Fitzgerald, of New York.

The introductory chapters deal with pioneer life in Missouri, embracing such subjects as "The West," "Education and Pioneer Schools," "Old Time Dances and Parties," "Civilization and Pioneer Weddings," "Then and Now," etc., giving a graphic account of the life, customs and habits of the people of Missouri in the "good old days," with funny stories and incidents relating to those times.

The remaining chapters of the book narrate the experiences of the author in the practice of his profession for a quarter of a century; dealing with such subjects as, "Ups and Downs in Early Practice" (two chapters) "Superstitions, Traditions and Foolish Ideas," "Preaching Doctors, Midwives and Nurses," "The Branch-water Man," "Deathbed Repentance and Confessions," "Consultations and the Code," "Liars and their Lies," "Sham Suicides," "People who Annoy Doctors," "Did He Kill His Wife?" "Going Back to College," "Quacks and Quackery," etc., giving many peculiar characteristics of humanity, as met

with both in and out of the profession, in the sick and in the well, with funny stories, accidents and incidents illustrative of these characteristics.

Physicians who have always practiced medicine in large cities or among intelligent, cultivated people in rural districts of the older States, know but little of the "ups and downs"—largely the "downs"—of the experiences of country doctors in the new States and Territories of the Far West. This work gives quite a lively description of them, related in a humorous style. It will be found to be quite interesting, and its perusal will enable one to spend a leisure hour, now and then, in a pleasant way.

How TO EXAMINE FOR LIFE INSURANCE. By John M. Keating, M.D., President of the Association of Life Insurance Medical Directors. 8vo. Pp. 211. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price \$3.00.

It has been the aim of Dr. Keating, in writing this book, to give to the Medical Examiner for Life Insurance a manual which is plain and practical, free from matters that are not of direct interest to him in the examination of an applicant for insurance, but at the same time sufficiently instructive to recall to his mind all the important points in relation to physical diagnosis that are likely to be of value to him.

The author does not claim to present anything original in the work, but he has endeavored, as far as possible, to collect what is of value from the text-books, and also from life insurance works that have recently appeared. He urges that a physician who proposes to examine for life insurance should especially prepare himself by a close study of such works as Da Costa's Medical Diagnosis, Finlayson's Chemical Diagnosis, Tyson's Practical Examination of Urine, etc. But, really, a medical man who has not become expert in examinations of the lungs, heart, and of the urine, and skilled in the manipulations of instruments of precision, as stethoscope, speculum, test-tube, clinical thermometer, microscope, etc., at almost the very beginning of his professional career, can hardly expect to become qualified to make examinations for life insurance, years after he has begun the practice of medicine, by studying Da Costa, Finlayson, Flint, Beale on the Microscope, Attfield and a host of other authors. There are probably now and then exceptions, but, as a rule, the expert has

obtained the knowledge and manipulative skill which qualifies to be an expert when he was a young man.

There is a large amount of useful information in Dr. Keating's work. Although we would not recommend it as a work for the study of physical diagnosis or examinations of the urine, yet it contains very many suggestions that an expert examiner of the lungs and heart and other organs of the body, who has had but little experience in life insurance examinations, will find very useful.

The work is divided into two parts. Part II. is devoted exclusively to Instructions to Medical Examiners as issued by the various life insurance companies. This Part, which forms about two-thirds of the work, will be found especially interesting and will make it very valuable as one of reference. The "Instructions" of twenty-four Life Insurance Companies are given, which number embraces all companies of any prominence in the United States. This book probably is the only publication in which they can all be found; and we feel sure that this feature of the work will make it of such value to a physician interested in life insurance that he would refuse \$25.00 for the volume, if he had one, if he could not replace it with another, though the price of the book is but \$3.00.

Translations.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy,
Cincinnati, Ohio.

THE PROGNOSTIC VALUE OF HÆMOPTYSIS IN TUBERCULOSIS— TREATMENT.

CLINIC OF PROFESSOR JACCOUD AT THE HOSPITAL PITIE.

THE prognosis of haemoptysis in the course of a tuberculosis is founded upon sufficiently precise characters, which it is indispensable to know and to be able to appreciate at their true value. The three following observations relative to patients who were in the hospital at the same time are very instructive examples.

The first, aged thirty-eight, was taken suddenly with a

very abundant haemoptysis, which lasted from eleven to twelve days, was accompanied by a very slight febrile movement, which lasted but two days, of but little importance from a prognostic standpoint.

A second patient, aged twenty-three, was taken suddenly with a very abundant haemoptysis, which continued at intervals and was not completely arrested until after ten days. There was no fever at the outset, but after six days it set in suddenly, and just inversely from the preceding case, who had a vestige of initial haemoptic fever; in this case the fever was secondary. It could have been supposed that in this case also the haemoptysis was initial and that this patient was in the first stages of tuberculosis; nevertheless, interrogating him carefully, it was discovered that he had been coughing for some time, and furthermore, the bacilli were discovered in his expectorations from the first days of his admission—and bacilli are never found except at an advanced period of the disease.

Finally, a woman of twenty-six years was attacked with a haemoptysis which lasted fifteen days, with an interruption of three to four days. But in her the haemoptic fever was initial, was very severe, and persisted during the whole period of the haemoptysis and after its cessation. As to the beginning of the tuberculosis, that dated back about two years.

These three cases are examples of frank haemoptysis having occurred suddenly and in a state of health considered as good, but connected, nevertheless, with a tuberculosis, and not initial, despite the appearance. This distinction is of the greatest importance, for it is an altogether different matter whether we are confronted by a tuberculosis at its outset, or by one more or less ancient. We must therefore search out whatever can be of any utility on this point, and ask very precise questions in this direction. However, haemoptysis in the course of a tuberculosis is much more frequent than at the outset.

Another very interesting point for study is the influence of the intercurrent haemoptysis in the tuberculosis in evolution. The example of these three patients shows three different eventualities in this influence.

The first patient had, in fact, but an ephemeral fever, and he presented the maximum of favorable chances. The hemorrhage, despite its abundance, had no influence on the course of the tuberculosis, which was torpid before and which seemed to preserve the same character afterward;

the general as well as the local state remained in the same conditions.

In the second patient the conditions already different. There was no fever at the outset, but it showed itself very markedly at the end, when the temperature reached 39.6° . This invasion denotes with certitude an acute pulmonary process consecutive to the haemoptysis. Their consequences are very variable, but three principal complications are more commonly observed: a pneumonic focus, a broncho-pneumonic focus and secondary acute granulosis. The thermometric curve indicates here very clearly what has happened. The fever has lasted from ten to twelve days, then ceased entirely; we can not, therefore, suppose the presence of acute tuberculosis. There remain, therefore, but the two other hypotheses—of which the second is the more probable, because no well-marked pneumonic focus can be discovered. The principal point, however, is that we can exclude acute tuberculosis. Nevertheless, there was an aggravation of the condition of the patient, although the broncho-pneumonia did not persist.

In the third case, the haemoptysis was of a febrile nature; the fever ceased with the hemorrhage, but it recurred again four or five days afterward and has since persisted. We may therefore conclude that the lesion which gave rise to the fever is still in a state of activity. This symptom, grave in itself, becomes of still greater importance if there be added thereto those revealed by an examination of the chest; everywhere there are heard sibilant rales, and some moist rales, symptoms of an acute catarrh of the bronchi; and these are also the characteristics of acute tuberculosis of catarrhal character. No trace can be found of pneumonic foci except at the apices some old lesions of tuberculosis.

All the symptoms persist since a month, and we can conclude that the haemoptysis has had the effect of transforming a torpid tuberculosis into an acute secondary tuberculosis; there are some appreciable granular deposits, as in the left submammary region, for example, where a focus of very fine and very dry rales can be found. The prognosis has therefore become a fatal one, for without the hemorrhage the tuberculosis might have maintained its torpidity.

The initial haemoptysis, that is to say, constituting the first phenomenon of tuberculosis, may be suddenly fatal, and Graves has already noted the fact that he has seen more than one patient succumb to a first hemorrhage without the

autopsy showing any pulmonary lesion. Jaccoud has also noted this lightning-like course. On the other hand, when haemoptysis occurs with sudden fever, it constitutes one of the ordinary modes of debut of that form of the malady called pneumonic tuberculosis. Inversely to the ordinary tuberculosis, it nine times out of ten makes its debut with a febrile haemoptysis.

Having recognized the importance of haemoptysis from a prognostic point of view, it is well to specify more particularly which of these diverse eventualities may occur when this phenomenon supervenes; and this prevision can be established on the one hand from the febrile element, and on the other from the manner of termination of the hemorrhage.

The febrile element is of considerable importance; if the haemoptysis is not accompanied by fever, and if this latter does not supervene within the eight days following, the prognosis is as favorable as possible, and we may be assured almost that the haemoptysis will not have any bad effect on the tuberculosis; this all, however, requires that an additional favorable symptom be present—that is the mode of termination of the hemorrhage.

This latter may terminate after three different methods:

In the first, the blood preserves its rutilance to the end, the final expectorations are as red as the first.

In the second mode more frequent than the first, two days before the end of the haemoptysis, the blood becomes black and is thrown out in small lumps; furthermore, it does not resume its natural red color by contact with the air; nevertheless, it is pure to the end.

Lastly, the third mode, the blood becomes black, then is mixed with viscous mucosities, and is gradually replaced by this viscous expectoration, which continues.

The signification of each of these three methods is different.

In the first case, the blood poured out into the bronchial tubes has not penetrated or sojourned in the canaliculi or alveoli, and this particular point, joined to the absence of fever, makes the *prognosis an excellent one*.

In the second case, on the contrary, the blood is black because it has penetrated the alveoli and remained therein a sufficient length of time to have lost the power of rearterializing itself. It is to be feared, then, that some may have remained, and will set up an irritation; we must therefore

be on guard, for this remainder may be the starting-point of a broncho-pulmonary process.

Lastly, when the viscous expectoration accompanies and follows the haemoptysis, this irritation referred to above may be considered as certain, for it is this which causes the phenomena.

We observe still other forms of haemoptysis, which, although totally independent of tuberculosis, may, nevertheless, when they occur, be phthisiogenic; they produce phthisis *ab hemoptoe*. For this, they produce first a pneumonia; resolution is not perfectly accomplished, or rather badly so, and the consolidation remains a point favorable for the fixation and development of the bacillus. The haemoptysis therefore does not directly provoke the tuberculosis; there is an intermediary between these two accidents, namely, the pneumonic process.

In the treatment of haemoptysis there are some particularities upon which M. Jaccoud more especially insisted. The hemorrhages must from this standpoint be considered according as they are apyretic or febrile. In the first case, it frequently suffices, independently of the general measures applicable to all hemorrhages, to administer rhatany, gallic acid, or perchloride of iron. If the hemorrhage is very profuse, we use subcutaneous injections of ergotine, or administer extract of opium in large doses, in pills of .02 centigrammes every hour till drowsiness is produced; the dose can be increased from .02 to .40 centigrammes. We also make use of revulsives, cups, etc.

If fever be present, the remedies are different; and before all, it is ipecac in fractional doses. According to the vigor of the patients we give doses of from .05 to .10 centigrammes, a dose every quarter of an hour up to the production of nausea, but without emesis; then the interval between the doses is extended to every half or to every hour.

The ipecac is here preferable to the tartar emetic, because there is not so much danger of provoking a diarrhea, which would be hurtful under the circumstances. There is, however, one inconvenience with ipecac, and that is debilitated patients easily fall into collapse. The remedy therefore should not be employed, except where we have close supervision of the patient, and can assure ourselves, at least every hour, that the temperature is not falling beyond the normal.—*Jour. de Med. Prat.*

Editorial.

WITHOUT OUR CONSENT.—In our last issue of the MEDICAL NEWS we mentioned that we had received a couple of tracts upon Life Insurance, and commented at some length upon one of them. One of the tracts, which was the one we reviewed, was made up of an editorial copied from the *Medical Record* of New York, and a criticism upon this editorial, copied also from the *Record*, by Dr. Wm. Judkins, of Cincinnati, and revised by him. The title of the editorial from the *Record* was "*The Physician's Family, and the Provision that He Leaves for It;*" the title of Dr. Judkins' criticism was "*Preparing for the Inevitable.*"

Dr. Schrady, the editor of the *Record*, expressed himself very strongly in his editorial in favor of life insurance, and advised physicians to take advantage of it by insuring their lives for the purpose of making provision for their families, in the event of their decease. But as he recommended the patronage of *Mutual Life Assessment Companies*, Dr. Judkins criticised that portion of his article, asserting that such companies were unreliable, and that the probabilities would be, if a physician should insure in one of them, about the time he "would decide to die," it also would determine *de vita decedere*.

In reviewing the tract we also expressed a want of faith in the so-called *Mutual Assessment Companies*, sometimes styled *Mutual Benefit Associations*, and advised physicians to keep out of them. In the way of illustrating their unreliability, we related the history of an *Assessment Company* that was organized in Louisville about a dozen years ago, in which a large number of Cincinnati medical gentlemen insured, but were soon glad to retire from it on account of the heavy expense it entailed to meet the assessments.

Every number of the MEDICAL NEWS contains reviews of books and pamphlets. After a review, which we have written, has appeared in the journal, we do not anticipate anything more to come of it than to be read by the subscribers of the MEDICAL NEWS. But such was not the case as regards our review of the tract in our last issue, consisting of Dr. Schrady's editorial in the *Record* and Dr. Judkins' criticism of it. To our surprise, a few days after the publication of the April number of the NEWS, we received through the

post-office a tract made up, not merely of the *Record's* editorial, "*The Physician's Family, and the Provision that He Leaves for It,*" and Dr. Judkins' criticism, "*Preparing for the Inevitable,*" but containing, in addition, quotations from our editorial review of the tract in the April number of MEDICAL NEWS, such as the remarks that we made recommending physicians to insure their lives for the benefit of their families after their decease; and copying at length our statements in regard to the unreliability of Mutual Assessment Companies, and warning members of the profession to keep out of them. These lengthy quotations, which constituted almost the whole of the editorial article, had an appropriate heading in large letters, stating that it was "By J. A. Thacker, A. M., M.D., Editor of the CINCINNATI MEDICAL NEWS," etc., etc.

Those physicians who have a personal acquaintance with us, we feel sure, need not a statement from us to the effect, in order to believe that it was without our consent that a tract for general circulation to which we appear as a contributor with such titles attached to our name as are only proper to make use of when issuing a professional paper.

It is needless to say that the tract was issued by an *enterprising* insurance agent of one of the "old-line" companies.

MICROBES IN BRONCHITIS.—The *Lancet*, of May 17, publishes an interesting article on "Bronchitis," by Vincent D. Harris, M.D., F. R. C. P., Physician to the City of London Hospital. He states that the pathology of all cases of bronchitis is very much the same. An irritation, either general or local, sets up a certain amount of inflammation of the bronchial mucous membrane, and with the inflammation is more or less exudation. The mucous glands, wherever they are present (and they do not disappear until the cartilage disappears from the bronchial walls) and the superficial epithelium lining the bronchial tubes throughout the whole of the inflamed district take part in the inflammation and add to the exudation. Thus there are found in any bronchitic sputum epithelial cells more or less changed, colorless blood-corpuscles, and often colored corpuscles as well as mucus and mucus corpuscles which are about the size of colorless corpuscles of the blood, and which are, according to Hamilton, immature epithelial cells, the waste products of the germinal or formative layer of epithelium, and possibly of the mucous glands themselves. "In addi-

tion," says Dr. Harris, "there are always found micro-organisms of different kinds, chiefly micrococci, but sufficiently numerous bacilli. Nearly all these bacteria are most likely saprophytic only in their nature." (At this point specimens of the bacteria were shown the class by Dr. Harris). "When we remember that the mucous membrane of the mouth swarms with micro-organisms, of which Professor Miller, of Berlin, has isolated no less than twenty-five different species, and that most of these appear exactly alike under the microscope, it does not promise to be an easy task to ascribe to one or other species the important pathogenic function of having produced this disease, or indeed asthma, and yet there is no reasonable doubt that bronchitis and pneumonia—and why not asthma?—are sometimes caused by specific micro-organisms.

"The immense number of micro-organisms in ordinary bronchitic sputum makes it all the more important that those who undertake, for diagnostic purposes, the examination of sputum for tubercle bacilli should attend most carefully to the differentiation of the micro-organisms with acids, alcohol, or both, as well as to the double staining of the specimens they examine. Otherwise it is possible that some of the rod forms of ordinary bronchitic sputum may be mistaken for tubercle bacilli. The negative sign—namely, the absence of tubercle bacilli—is most useful in the diagnosis of simple bronchitis. In bronchitic sputum there are also sometimes small masses of albuminous or fibrinous material, sometimes the spirals Leyden, Charcot's crystals, cholesterin, leucin, and tyrosin, etc. I should like to express my conviction that no hard-and-fast line of demarkation can be drawn between catarrhal bronchitis and the so-called croupous form; in fact, between the simplest form of catarrh, to which many would hardly give the name of inflammation, and in which there is scarcely anything abnormal but some swelling of the mucous membrane, and the severe form, in which casts of the bronchial tubes are expectorated or are found post-mortem in the bronchi. In fact, I believe there is every possible stage between these two apparently diverse forms of the disease—without any break one form passes insensibly into the other. The cases which stand, as it were, midway between the extremes, are those in which the sagro-grain fibrinous masses occur in the sputum, of the color of boiled rice, two cases of which have been in the hospital lately."

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 270. }
Old Series.

JUNE, 1890.

{ VOL. XIX. No. 6.
New Series.

Original Contributions.

Diphtheria.

BY JAMES T. WHITTAKER, M.D.

Condensed from Didactic Lecture at the Medical College.

DIPHTHERIA, *διφθέρα*, leather, membrane, term diphtheritis, first applied by Bretonneau 1821, angina maligna; Ger., Braune, from prima glowing coal; Sp., garrotillo; a grave, acute infection of the exposed mucosæ, especially the fauces, pharynx, larynx, nose, exceptionally the vulva, vagina, uterus, palpebrae, prepuce, anus, occasionally of any wound of the skin; characterized by the formation upon and in the tissues of the affected surface of a greyish-white membrane, tumefaction and pain in the throat, dysphagia, enlargement of the lymphatic glands, general prostration, comparatively short though indefinite duration, complicated often with septic infection and followed at times by a paralysis peculiar to this disease.

The history of diphtheria is involved in inextricable confusion, from the fact that all kinds of sore throat, simple and malignant, catarrhal and croupous, gangrenous, individual and epidemic, were differently styled by different authors up to the time of Bretonneau, who succeeded in disentangling diphtheria proper as a disease distinguished by the formation of a false membrane in the throat. That the ancient writers were familiar with the affection is recognized in a passage from Aretæus, who speaks of ulcers covered with a *quodam concreto humore*. Such, he says, as are broad, hollow, foul and covered with a white, livid or black concretion are pestilential; . . . the disease seizes the neck; and these die within a few days from the inflammation, fever, fetid smell and want of food. But if it spreads to the throat, it occasions death by suffocation within the space

of a few days. . . . The land of Egypt engenders it. . . . Syria also, and hence they have been named Egyptian and Syrian ulcers. Aretæus also describes crustaceous and pestilential ulcers of the tonsils most frequently affecting children, causing suffocation. It occurs in spots of ash color in the throat.

Disregarding now the frequent allusions made to the anginas by Arabian and Oriental writers, because always confounded with secondary affections after plague, typhus, variola, etc., with the observation of Ballonieus, Rome 586, concerning a disease of the fauces which obstructed the throat and quickly caused death, of Cedrenas concerning a disease which prevailed in certain provinces of the Byzantine Kingdom, 1039, known as cynanche, and attended with a great mortality; of Short concerning an affection of the throat in England, 1389, which carried off a great number of children, of Forrest who mentions an epidemic of malignant angina in Amsterdam, 1517, and of Sennert in the Netherlands in 1545, we read the first clear and certain account of the disease as it prevailed under the name garrotillo in Seville, 1583, to extend throughout Spain 1583-1618, the year 1613 being characterized from the frightful mortality as the "anno de los garrotillos." The disease appears next unmistakably in Italy, 1610, while Portugal was visited but lightly in 1626. The first definite account of it in Holland and France occur in 1745, in England 1748, in Switzerland and Germany 1752, and in our own country, in New York, 1771, our northern colonies 1755, Virginia 1799. Diphtheria now nearly disappears from medical history from 1810-1840, with the exception of France, where it again showed itself in Lyons 1810, and in Tours 1818-1821, where it fell under the observation of the eccentric but always original Bretonneau, who dissociated it, as stated, from other affections of the throat and distinguished it as a special disease. Members of the legion of la Vendee in garrison at Tours, according to the graphic account of Troussseau, were attacked with an affection of the gums to which the surgeons gave the name of land scurvy, and within a short time the number of patients was so great, in fact the whole legion suffered, as to overcrowd the surgical and necessitate a transfer of some of them to the medical wards, under the charge of Bretonneau. This keen observer soon saw that the disease began not in the mouth but in the throat, on the tonsils, whence it extended to the mouth and

in some cases to the larynx to produce true croup, of which Bretonneau had seen hitherto but two cases. It could be separated from croup by its location and from malignant and gangrenous angina, under which terms with others it had been previously known by the characteristic false membrane, whence the name diphtheritis, or "*inflammation pelliculaire*." Bretonneau stoutly maintained that it was always a local process at first with subsequent infection. Later, 1825, he recommended alum in its treatment, made tracheotomy in grave cases of invasion of the larynx and inserted the double canula for this purpose. This separation of diphtheria from other affections of the throat was the first distinct emancipation from the dangerous doctrine of Broussais, who considered inflammation as the cause of all diseases, the variety of which was due simply to its severity and extent. Inflammation reigned supreme in the etiology of all diseases and treatment by bleeding, and other antiphlogoses was the natural result or practical outcome of this view. With the courage of conviction based upon direct observation, Bretonneau maintained that it was the character of the inflammation rather than its intensity or seat which determined the nature of this disease. The local origin from without inwards as distinct from infection from within outwards was thus foreshadowed or distinctly claimed and the entering wedge of specificness was thus introduced into the flock of the acute affections. For as Trousseau, the pupil of Bretonneau remarked, "in diphtheria it is as in malignant pustule, in which malady, by making a direct attack upon the local affection, we stop the progress of the general disease. . . . So also it is in diphtheria; by energetically treating the local affection, as soon as it shows itself, we arrest its progress and prevent the occurrence of ulterior symptoms.

The new era of general dissemination or pandemic occurrence dates according to Hirsch from 1857-8, when the disease appeared in or was carried to remote parts of the earth, as India, China, Australia, Polynesia, Africa. It showed itself almost simultaneously in California and New York, 1856, next in the Eastern States, then in Pennsylvania, New Jersey, Virginia, Indiana, Illinois, Mississippi, Louisiana, Kansas, Minnesota and Oregon, 1867. Our first accounts of it date from, Iceland, 1856; Mexico, 1864; Greece, 1865; New Foundland, 1867; South Russia, 1872-79, when it raged in villages to such extent that Kupffer says "the children disappeared."

Etiology.—Neither season, soil nor social caste are directly concerned in the production or spread of this disease. Hart says regarding soil: “Diphtheria has swept across the marshy lowlands of Essex and the black moors of Yorkshire, that are fanned by the sea breeze; it has seated itself on the banks of the Thames, scaled the romantic heights of North Wales, and has descended into the Cornish mines. It occurs on ships in all parts of the sea.” Trousseau declares that he has seen diphtheria rage with terrible virulence in the villages and hamlets of Loirst, “remarkable for their salubrity and geographical positions,” while the villages of Sologne, in the midst of a marsh, remained exempt. According to the report, 1875, of the Registrar General of England, diphtheria was more fatal in the healthy districts than in all England. Seitz says of it that it showed itself alike among all classes, poor and rich, laborers and aristocrats. It picks upon princes’ families, and with a preference for the rich over the poor, according to Newcourt, Verdum, 1850, in the proportion of 15:4. Sunit remarks of the epidemic of 1859 in St. Mary-Cray upon the “remarkable exception of the pauper classes,” and Dr. Driozola, Lime, says that while the disease raged among the better classes, there was not a single case in the hospital for men and but two in that for women. Was a connection, asks Hart, traced between the localities of its invasion and the marshy, ill-drained character of the land—the next season it was found to ravage dry and elevated stations with equal severity. So the disease prevailed with “unequalled fatality,” according to Wooster, in the dry air of California, in the hot, wet weather of Algiers, March-July, 1865; in Tunis, May-August, 1882; Gaudeloupe, August-November, 1860; Cochin China, September-October, 1864; in the Bermudas preferably in the hot season; in Mexico, according to Heineman, at all seasons of the year.

Derivation of the disease from vegetable decay or sewer gas emanation has therefore no more significance than derivation of the plague from the putrefaction of corpses, yellow fever from the crowding of slave ships, typhoid fever from decomposing animal matter, or tuberculosis from defective ventilation with these diseases. Diphtheria is derived only from itself, and is due to or produced by a specific cause, which from the nature of the disease must be a micro-organism.

But the demonstration of the particular micro-organism

which produces diphtheria is still undetermined. The difficulty investing it pertains to the localization of the disease. The mouth is the main avenue to the body, and the throat of necessity a reservoir for every kind of micro-organism which enter with the air, the food or the drink. Hence all studies of the bacteriology of diphtheria preceding the discovery of Koch of the solid culture soil whereby it became possible to isolate micro-organisms, have historic interest only.

The frequency and gravity of the disease attracted the attention and engaged the study of one of Koch's immediate pupils in the early history of the health office at Berlin, and it was as soon as 1883, the year following the announcement of the tubercle bacillus of Koch, that Loeffler declared the frequency with which he had encountered the bacillus since connected with his name in diphtheria. Klebs had previously seen the same structure among others in the false membrane of this disease, and had recognized it as one among other causes of the disease, so that the micro-organism is now known as the Klebs-Loeffler bacillus. To Loeffler is due the credit of having first isolated it and experimented with it upon lower animals.

This bacillus is about as long but is twice as thick as that of the *b. tuberculosis*. It is always rounded at both ends, and is frequently knobbed to present the appearance of dumb-bells, by which name it is commonly known. It is immobile, shows no spores, has its optimum temperature at body heat, and stains perfectly with alkaline methylene blue. It thrives in most of the culture soils, best in blood serum, luxuriates in milk, in which it lives a long time, and produces when injected into the bodies of certain animals definite symptoms and speedy death. Thus it develops in guinea pigs, rabbits, chickens and pigeons at the seat of inoculation a pseudo-membrane, in which it rapidly multiplies, though it never penetrates the internal organs, and is never found in the blood. Most of these animals succumb within a few days after its introduction into the tissues. Injected into the trachea of these animals or engrafted upon a scratched conjunctiva or vagina, it develops the same pseudo-membrane found in human croup. Paralysis follows in certain cases. But inasmuch as this bacillus was not found in the membrane of all cases, and inasmuch as it was once found in the mouth of a healthy child, Loeffler was willing to declare this bacillus a probable, not a positive

cause of the disease. These conclusions were published in the health office report of 1884. Three years later the same observer published the result of a further examination of ten cases in which this bacillus was found without exception in every case. Previous to this publication Baber reported the discovery of Loeffler's bacillus in fourteen cases of pharyngeal and laryngeal diphtheria, also in three cases after measles, one after scarlet fever and one in diphtheria of the conjunctiva, in all nineteen.

In 1888 v. Hoffner isolated the genuine Loeffler bacillus in 8 cases of pure diphtheria, in three cases of diphtheria after measles, in 19 after scarlatina, and in 4 of 11 cases of perfect health. It is only proper to add, however, that the only experiments made in proof were inoculations to prove virulence by causing death.

During this year Roux and Yersin, of the Institute of Pasteur, declared that they had discovered the Klebs-Loeffler bacillus and proved it by culture in 15 cases. Prudden, 1889, concludes, after a resume of the subject up to this time, that while the Klebs-Loeffler bacillus has been discovered and cultivated 24 times in 28 cases, it has been found in 14 of 34 cases which had nothing to do with diphtheria. Hereupon Prudden gives the results of his own investigations, which disclosed the universal presence among other bacteria of streptococci, which he is inclined to consider the cause of the disease. Prudden declares also that while 20 different species of bacteria were isolated in his studies, "the bacillus of Loeffler was not found in any of the cases." Prudden is supported by Baumgarten and Fraenkel in the belief that the streptococcus pyogenes is the or a probable cause of epidemic diphtheria; a belief, says Weichrelbaum, after a short review of Prudden's work, which militates against a fundamental principle of bacteriology that the same micro-organism always produces the same disease.

C. Zernius, of Kiel, 1889, from a scrupulously conducted series of observations demonstrated by culture the Klebs-Loeffler bacillus in 18 of 20 cases of absolute epidemic diphtheria, further in one case of somewhat dubious diagnosis, with the conclusion that the constancy of its presence is proven by his studies. This author finds the diphtheria bacillus to be exquisitely sensitive to outside influences, so that the least change begets anomalies of form or coloration, all of which, however, can be restored in new genera-

tions. Even the reaction of the soil affects its growth. Thus all growth ceases so soon as the gelatine ceases to turn red litmus paper blue. It will grow at a temperature of $19-42^{\circ}$, with its optimum at $32-37^{\circ}\text{C}$, body heat. Every form and variation whatsoever is killed in ten minutes at a temperature of 60°C , 140°F . Thus the antimycotic action of Mousel's solution may be partly due to its avidity and the virtue of steam in croup to high temperature as well as to mechanical solvency. Zarniko confirms the discovery of Roux and Yersin, that a soil filtered free of bacilli will produce the same train of symptoms as the bacilli themselves, which fact, taken in connection with the observation that these bacilli are never found in the blood, refer all constitutional signs to an enzyme or ptomaine. He maintains also that, while he has examined with great care numerous other affections of the throat, he has never found this bacillus in any disease but true diphtheria. Thus 11 catarrhal anginas (7 common cases, 3 scarlatinal, 1 rubeolar), showed not a single colony, and 18 mucosae of otherwise effects, 1 diabetes, 3 rheumatism, 5 skin disease, 1 epididymitis, 4 convalescence from pneumonia, 2 phthisis, 1 with it in sufficiency, 1 chronic myelitis, tested, all of them, with every precaution, disclosed in no case the diphtheria bacillus. Therefore the author concludes the result of these studies supports the view that the diphtheria bacillus is the cause of epidemic diphtheria. Kolisko and Poltauf, 1889, declares that the Loeffler bacillus is now meeting its full recognition as the cause of the disease. They found it in every one of 50 cases of different forms of throat and nose diphtheria, as also in a few cases of spontaneous croup of the larynx and trachea. Croup and diphtheria must therefore be regarded hereafter as etiologically the same. They found it further in a case of diphtheria of the conjunctiva, but never in a case of diphtheria angina after scarlet fever or measles. They confirm the statement that the bacilli do not enter the blood, and that soils filtered free produce, when injected, the same effects as soil containing bacilli. Diphtheria, they conclude, must therefore be regarded as a local infection by a bacillus whose virus produces a general intoxication. These authors emphasize also the important role in diphtheria of mixed infection or secondary invasion, but all the other observers mentioned encountered always other bacteria, especially strepto and staphylococci, which penetrate the depths of the tissues

and induce general infection. Thus develops the so-called pernicious, malignant or gangrenous diphtherias. Loeffler had always maintained that the true diphtheria bacillus may produce the disease only when engrafted upon a scarified mucosa, but Kolisko and Pultauf claim that these lesions are not necessary in man. Any quiet spot or crypt or involuted follicle offers the necessary seclusion and protection for the development of these bacilli.

Based upon all these observations, Fruhwald, 1889, boldly asserts the absolute necessity of local therapy. This treatment should be instituted with energy at the start, and be maintained throughout the course of the disease. Roux and Yersin, 1889, in the further prosecution of their experiments, describe the properties of the poison separated from the diphtheria bacillus by means of the Chamberland porcelain filter. 1. A pure culture of the diphtheria bacillus in slightly alkaline veal broth has for the first few days an acid, and later an alkaline reaction. 2. As long as the pure culture is acid, it is only slightly poisonous; as soon as the reaction becomes alkaline, the poison becomes decidedly stronger.

When the bacilli are separated by filtering, the culture fluids cause paralysis in dogs and sheep, similar to that which follows diphtheria in man. Rats and mice withstand, without evil effects, doses of poison which would kill a medium-sized dog. 3. The diphtheritic poison is very similar in its properties to diastase; heat weakens the poison greatly. As some ferments increase their activity greatly in alkaline solutions, and others in acids, so the diphtheritic poison is much more active in an alkaline solution, and, on the contrary, loses its activity when brought in contact with an acid. Even very small quantities of acid are sufficient to lessen, very decidedly, the activity of the poison. 4. As great as is the effect of the poison when administered hypodermically to animals, as ravens, pigeons, it is slight when given them per os. The strength of poison of the culture fluid does not show the strength of poison of the diphtheritic micro-organism itself, neither is the strength of poison of any other micro-organism shown by the strength of poison of the resulting culture fluid. A micro-organism may be of itself harmless, while a culture from it may be very poisonous in its workings.

The authors draw the conclusion that the energetic toxic action of the diphtheritic poison, which causes such serious

effects even in the small doses given by them, points the way to the physician to prevent the growth of the membrane from the beginning, so as not to give the bacillus time to produce a sufficient amount of poison. For, contrary to the procedure of many other infectious diseases, the infection in diphtheria is not produced by an invasion of the tissues by a microbe, but by the dissemination of a poison, which is produced by the diphtheritic micro-organism on a mucous membrane often only slightly injured, through the entire organism.

Wintgens and Vander Brink, 1890, examined membrane removed from the throat of seven cases, on the 1, 2, 4, (3 cases) 7 and 21 days of the disease. The Klebs-Loeffler bacillus was found in every case, cultivated in every case, and successfully inoculated in every case. Rabbits injected subcutaneous or intravenous, with 0.5 ccm., bouillon culture, all died after paralysis; no bacilli were found in the blood or internal organs. Virulence remained the same after the hundredth generation. Pure cultures, filtered free of bacilli, showed the same virulence, which was entirely destroyed by boiling; the older the cultures the more intense the virulence; albuminuria followed every injection. Pigeons showed characteristic paralysis in three weeks, remaining meanwhile apparently perfectly sound. The authors confirm thus previous conclusions in every respect.

Escherich, 1890, convinced of the etiological significance of the Loeffler bacillus, cultivated the membrane itself on various soils, and inoculated with these soils rabbits, pigeons, chickens and dogs. Young dogs proved very susceptible to the poison, succumbing in 2-3 days after subcutaneous injection, with the signs of hemorrhagic edema. Introduction upon the trachea developed as in rabbits a pseudo-membrane which, in most cases, suffocated the animals, though a few recovered. Membrane for 22 cases of diphtheria was used in this way. From 19 the presence of the Loeffler bacillus was recognized in the first culture, in the 20th case only after repeated cultures. Two cases failed to show it. The whole experiment of culture and inoculation shows its results in three days, even from the minutest particle of membrane, so that the diagnosis of a doubtful case can be quickly and certainly established. Streptococci and other bacteria found with this bacillus and found also in all kinds of throat affections, have nothing to do with the formation of the false membrane.

Klein, 1890, having learned that cats are affected with diphtheria before, during and after attacks of human beings in families where they are kept, was led to experiment upon these animals, with the result that inoculation of the corner or denuded surfaces of the soft palate with pure cultures showed the same changes, with also the internal lesions of the kidneys, spinal marrow and lungs, observed in other animals. Loeffler, 1890, recognizes these bacilli as identical with his own, and accepts the conclusions as verifying his original statements, so that the etiological role of this bacillus seems now to be established.

Symptoms.—After a period of incubation of 3-5 days, an average typical case of diphtheria begins with a chill or chilly sensations, attended with malaria, rise of temperature, more or less nervous unrest, and in the course of the same day distress in the throat. In lighter cases throat symptoms may alone direct attention to the character of the disease, while in more pronounced cases the general distress assumes such prominence that the practitioner is led to look into the throat only because he may find for it no adequate explanation elsewhere. Thus it may happen that the disease is not recognized until the third or fourth day, by which period valuable time for therapy is lost.

It is characteristic of diphtheria to show objective signs in the throat very early in the history of the disease. Along with the complaints of dryness, burning and constriction, evident dysphagia and tenderness, there may be merely a more or less pronounced hyperaemia about the tonsils veil of the palate or pharyngeal wall, to constitute the so-called catarrhal cases in which the false membrane may be entirely absent throughout the course of the disease. Such cases are readily mistaken for a simple catarrh, tonsillitis or quinsy, until complications or sequelæ betray the true character of the disease.

For the most part, however, there is little room for mistakes. The false membrane shows itself early as flakes, spots or streaks, not easily distinguished from pure mucus upon the mucous surface, white, filmy or fleecy, easily detachable at first with the finger or handle of the spoon, to become in the course of a few days thicker, tougher and darker in color, and to involve the mucous coat to such extent as to leave a raw, bleeding surface after forcible removal. The false membrane may remain localized, or may spread gradually or rapidly over the whole interior of the

throat, to extend thence to the nose, Eustachian tube, larynx and bronchi œsophagus, or, being detached by cough or processes of sloughing, may renew itself in former sites to indefinitely prolong the disease.

Still later in the course of the disease, as a result of mixed infections, the membrane grows darker, greyish black or absolutely black, becomes more friable and is detached in places to hang in festoons or be insufflated with acts of respiration to excite violent cough or interfere directly with respiration. The peculiar and fetid odor of decomposition is now usually present; the face is pallid, the pulse feeble or easily excited, and blood poisoning is marked by apathy and profound adynamia.

With the extension of the disease deep into the tissues of the mucous membrane there is invasion of the sub-mucous connective tissues, lymph ducts and glands and inter-glanular connective tissue, so that individual glands tender to pressure may stand out prominently above the general surface of the neck or the natural outlines of the neck be obliterated in a universal tumefaction.

As in all the grave infections, parenchymatous changes may occur in the heart, liver, spleen and kidneys, so that heart failures in the course of the disease, peri- and endocarditis, with subsequent valve lesions, albuminuria with subsequent Bright's disease, may attend the course, complicate the progress or protract the convalescence if they do not directly take life.

The paralysis which occurs during or much more frequently after diphtheria is, as stated, in its course and character peculiar to this disease. It shows itself in about one-fourth of all cases which do not succumb to the attack. Rare in infancy, liability to it increases with years. It occurs alike in the strong and feeble, in mild as well as in severe cases, in diphtheria of other mucosæ, or of wounds as well of the throat. It has been observed in the throat as early as the second, most frequently at the 5-10 day of the disease, but as a rule not until the 2-3 week after the disease has run its course. It is regarded, hence, as a post-diphtheritic process, due in all probability to the delayed action of ptomaines upon central nervous organs. Its mode of invasion and progress constitute distinctive peculiarities of diphtheritic paralysis. In the first place it is ushered in at once without prodromata, usually in the midst of health or that degree of it which is left in convalescence from the

attack proper. With very few exceptions it shows itself first in the palate, in difficulty of deglutition and often of phonation. Fluids regurgitate through the nose and the voice is altered. On inspection it is seen that the palate drops or is not lifted in pronouncing "ah," or the uvula is deflected. Gargling is impossible. The paralysis may extend to involve also the epiglottis, which ceases then to protect the larynx during deglutition, or more rarely the pharynx to increase the dysphagia. There is often also paralysis of sensation, so that the veil of the palate may be manipulated without reflex action, or the pharynx may form a pouch in which food accumulates.

The paralysis next affects the intrinsic muscles of the eye. Far sight remains, but accommodation for near objects, as in reading, is decidedly interfered with. Yet the light reflex persists unaffected. Here the paralysis may cease, or in about one-half of cases the extremities, the lower first, are affected with tingling numbness formication. More frequently motion alone is impaired, the legs are weak, there is early fatigue with a sense of heaviness or weight, the patient staggers occasionally or constantly; the gait limps. As in the throat and eye, the affection is usually bilateral, though one side may suffer sooner or most. Electric motion, unimpaired at first, becomes feeble or absent to Faradization.

Knee jerk is always diminished, then lost, from and even before any sign of paralysis proper, a phenomenon of very great diagnostic significance and "part of a wider fact that the knee jerk is often lost after diphtheria ($\frac{2}{3}$ of cases), in which no paralysis occurs." (Bernhardt.)

Paralysis of the intercostal muscles, diaphragm and heart are fortunately very much more rare. Dyspnoea, vertigo, heart failures, with retarded, irregular and intermittent pulse, and fatal syncope result from attack of these muscles. Impotence from affection of the sexual centres is not quite so rare in adult males. The bladder and rectum are very rarely involved. It is in this order that diphtheritic paralysis shows itself as a rule, though the natural sequence is often disturbed, and "irregular waves of palsy seem to flow through the body." (Gowers.)

Still another peculiarity of diphtheritic paralysis is its incompleteness. The paralysis is rarely absolute. It is, as a rule, more a weakness than a total loss of power.

Diagnosis.—The points upon which the diagnosis of diph-

theria rests are: 1, the prevalence of the disease; 2, the absence of a previous attack, for the belief gains ground, contrary to previous opinion, that one attack secures future immunity. Thoresen claims that in 600 patients he never knew a second attack. He had the hardihood to quarter diphtheria patients in houses where children suffered previously, and never saw a second attack. Contrary opinion is due to confusion with follicular angina; 3, affection of *both* tonsils, with extension to the palate, etc.; albuminuria; discharge of a thin serous fluid from, or presence of false membrane in the nose; contagiousness. Tumefaction, lymphadenitis and fever are not essential. Typical cases may show none of these signs.

Diphtheria is distinguished from simple tonsillitis by its attack of others (en or epi-demic), false membrane, lymphadenitis and general tumefaction not present in tonsillitis; by the most profound prostration, adynamia, loss of knee jerk and subsequent paralysis in diphtheria; from quinsy, which is epidemic tonsillitis, by the most pronounced inflammation and acute distress, greater swelling and dysphagia, with at times œdema of the uvula, palate and glottis, absence of false membrane, presence of knee jerk, and notwithstanding the severity of the symptoms most favorable cause of quinsy.

Whether scarlitinal differs from true diphtheria is a question as yet undetermined by the researches of bacteriology. Clinically the affections differ as follows: the false membrane appears at once in diphtheria, later in the course 3-5 days of scarlatina; it shows itself in nearly all cases of diphtheria, but only in severe cases of scarlatina, viz.: such as are marked by high fever, delirium, etc., at the start; it shows a preference after the pharynx for the larynx in D., and for the upper respiratory passages in S. In connection with it suppuration of the cervical glands and affections of the ear are frequent in scarlatina, rare in diphtheria. The inter-glandular connective tissue is indurated in S. and only œdematos in D. Paralysis which is frequent in or after diphtheria is almost unknown in scarlatina. On the other hand, nephritis, a frequent sequel of scarlatina, is very rare after diphtheria. Lastly, treatment has much less effect on the membrane of S. Hence it is proposed by clinicians (Heuoch, Filatow) to abandon the use of the term diphtheritic in scarlet fever and to designate such cases as malignant scarlatinal anginas.

The prognosis of D. is always grave on account of liability to heart failure, to sepsis (from mixed infection) and to extension to the larynx (croup). All these dangers are lessened or prevented by jugulation of the disease by energetic local treatment at the start. Statistics which date from the time when the disease was believed to be constitutional with a local expression are valueless in determination of its gravity. Practitioners thoroughly convinced of the local origin of diphtheria do not fear it as they do scarlatina. It must be stated, however, that the amount or extent of the false membrane is no gauge of the gravity of the disease. Cases with throats covered as if with a layer of thick white paint often run a mild, short course, while the gravest symptoms, adynamia, heart failures, syncope, may occur in cases in which the membrane is so scant as to embarrass diagnosis. The gravity of the disease is rather a question of absorption than deposit, and the danger is determined by the penetrability of the barrier which the tissues interpose. This is a condition which may not be discovered by simple inspection. It reveals itself only in its effects. Profound adynamia, a feeble pulse, mixed infection, extension into the nose where it can not be reached, suppuration, gangrene, make the prognosis very grave. The paralysis of diphtheria generally subside, spontaneously, in from three weeks to three months, and may be much abridged with appropriate treatment.

Treatment.—From what has been stated it is obvious that the true treatment of diphtheria must secure or attempt the eradication of the membrane which contains the germs of the disease. This treatment must be introduced at once, or so soon as the diagnosis is made. A dubious diagnosis justifies it, inasmuch as under no circumstances can it do harm. What particular agent is employed is probably a matter of indifference, so that it be powerful enough to accomplish the object. Bretonneau used fuming hydrochloric acid. Carbolic acid, corrosive sublimate, creosote, and creoline each have their advocates. The author prefers above every other agent the subsulphate of iron, as first prepared by M. Monsel, military surgeon at Bordeaux, and commonly known as Monsel's salt or solution. The value of this remedy in diphtheria has been repeatedly remarked by the old school of French physicians, but it fell into disuse and almost disrepute with the reaction against the local origin of diphtheria in the past decade—a reaction which

banished all caustics and astringents from the therapy of the disease. Now, however, that the local origin is established, and the antimycotic action of the agent recognized as stated by direct experimentation, it will soon take its place as the most valuable of all the remedies recommended. For it not only destroys all micro-organisms which it may reach, but by its powerful astringent action interposes a barrier between them or their products and the blood, and thus prevents the absorption which produces the so-called constitution signs. The subsulphate is preferable to the tersulphate, on account of its greater astringency, and to the perchloride, which is much more astringent because it is much less irritant.

The remedy is applied best by means of a cotton wrapped sound, the end of which is immersed in the undiluted solution and pressed on withdrawal against the neck of the bottle, that the fluid may not drop into the larynx, and the false membrane is touched or the surface painted under a good light with the deftness and dexterity of an artist in touching up a canvas. One application a day will suffice in an average, two in an aggravated, case. It is generally well borne, exciting but little cough and expectoration, both of which are favorable for the dislodgment of the membrane. Retching and vomiting sometimes follow, processes which also facilitate the discharge of the membrane and stimulate the patient out of the apathy and adynamia characteristic of grave cases.

Inhalations of steam from a steam atomizer as hot as can be borne are also of great value if practiced repeatedly throughout the day and night. They accomplish more in the dissolution of membrane and disinfection of the throat than any chemical solvents, lime water, lactic acid, pepsin, papayotin, etc., and the various disinfecting gargles, etc., all of which are useless unless inhaled or applied more or less continuously, which is totally impracticable. The insufflation of boric acid ointment gr. xx— $\frac{3}{5}$ ss vaseline into the nose two or three times a day keeps the nasal passages moist and free and adds much to the comfort of the patient.

The general symptoms are best met with alcohol, which in its direct effects upon the heart as a cardiac stimulant best obviates the danger of heart failure. Digitalis preferably in infusion, $\frac{3}{4}$ j— $\frac{5}{8}$ ss every two to four hours may become a necessity in protracted cases. Nitro-glycerine acts quicker and does not at all irritate the stomach. A cup

of strong, black coffee with a tablespoonful of cognac is a quicker though more temporary restorative. Subcutaneous injections of morphine, ether, camphor, musk, above all, nitro-glycerine $3j$ may be necessary to bridge a case over an impending or actual collapse. But in the great majority of cases a bold local treatment, by putting a stop to further infection, will rescue a case from the profoundest prostration and put a new and more favorable phase upon the disease in the course of a few hours.

A Case of Ringworm of the Scalp Complicated by Pustular Eczema—Cure.

BY A. H. OHMANN-DUMESNIL,

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ALTHOUGH pustular eczema of the scalp is an ordinary affection, tinea capitis is rather infrequent in this city, and a complication of both diseases, attacking the same locality, is unusual. My purpose in reporting the following case is simply to call attention to the care which must sometimes be exercised in the examination of such cases, as well as in the treatment and management, the last being perhaps as important as any feature if not more so.

CASE.—C—, a well-nourished boy, a little over seven years of age, has parents in well-to-do circumstances. He is a blonde, well nourished, apparently, and is a child of marked intelligence and quick perceptions. He is well developed for his age. His hairy system, however, is somewhat deficient in quantity and his teeth give evidence of malnutrition in earlier life. Upon inquiry is developed the fact that his general health is not good. There is a want of power in assimilation and weakness on the side of the digestive apparatus. He is more or less dyspeptic. Besides this, he has a ravenous appetite and is permitted by his parents to indulge in "stuffing." The result of this is the dyspeptic condition accompanied by an irritable disposition and "nervousness." In addition to this, so-called malarial symptoms exist.

The local condition when I first saw the patient, who had been referred to me by Dr. Love, of this city, was about as follows: The scalp was the seat of a pustular eczema of

some standing. Yellowish crusts varying in size from the small finger nail to a silver dollar, were disseminated over the scalp. Several of these had a marked circular form, notably one in the median line, an inch posteriorly to the edge of the hair in front. Pustules were also discreetly distributed. Underneath a number of the crusts, which were from two to four lines in thickness, a collection of pus could be found. The subjective symptoms accompanying this condition were extreme tenderness upon pressure and an intolerable itching. The pruritus was so great that it prevented the patient from sleeping and, in consequence, increased the nervous irritability which was present.

The peculiar configuration of some of the crusts aroused my suspicions as to the presence of tinea tonsurans, more especially as the patient's sister was the subject of this latter affection, at the time. A few hairs were extracted, and upon microscopic examination, showed the well known infiltration with the spores of the trichophyton. Thus much being determined, the question which now arose was as to the best method of local treatment to adopt.

The first thing to be done was to remove the crusts. While it might appear to be a comparatively easy matter, it proved to be quite a task, on account of the irritability of the patient. Olive oil was freely applied to the entire scalp, and, in a few days, the crusts began to separate, showing raw, bleeding and suppurating surfaces beneath. Then began the routine treatment of eczema of the scalp. This was unsuccessful, in so far as it permitted the crusts to re-form and did not in the least alleviate the intense itching which was present. Having continued this for about two weeks, I decided upon a radical change in treatment, and, as the result proved, a successful one. The crusts were again drenched with oil and removed with forceps, despite the outcries of the patient. Immediately thereafter the entire scalp was freely painted with campho-phenique, this operation being repeated morning and evening.

From this time on, the crusts returned very slowly and in diminished numbers, the extreme tenderness of the scalp became less, as also the itching, and the suppurative process markedly decreased in quantity. In about two weeks the condition was practically cured, the scalp was clean, and all objective as well as subjective symptoms referable to it had disappeared. A number of bald spots showed themselves in the locality where the ringworm had existed and a fine

growth of hair soon manifested itself upon them. Microscopic examination of the young hairs failed to reveal the spores of trichopyton, so that my conclusion was that it was cured.

The general treatment and management of the case, I have no doubt, exercised a marked influence upon the successful termination of the condition. In regard to the general treatment, I had but little to do, it being conducted upon general principles. Anodynes were given at night to secure rest. I ordered alkalies and a restriction of the diet. Oat-meal mush in the morning and but a small quantity; a little meat at noon, with plain vegetables, and bread and milk at night. The patient rebelled at this dietary, more especially as all pastry and sweets were prohibited and coffee stricken off his bill of fare. The results, however, were such as to show the advantages following such a regimen. The stomach obtained tone, the nervous excitability disappeared, factitious strength gave way to vigor, and the child was in every respect one with a new constitution. This latter result, however, was not attained until some time after I had dismissed him from my care.

REMARKS.—One of the interesting points in connection with this case is the fact of the cure of the ringworm. No particular attention was paid to this, as it was my object to first rid the patient of the inflammatory trouble which existed and then turn my attention to the tinea. I was more than agreeably disappointed when I saw that the parasitic trouble had disappeared, as it is a well-known fact what a difficult matter it is to eradicate tinea tonsurans, some cases only disappearing spontaneously in years in spite of all the treatment. The question which naturally arises is, how did it disappear? In my opinion, the suppurative process of the eczema penetrated the hair follicles, and by rapid inflammatory action destroyed the hair bulbs, thereby removing the trichophyton with its pabulum. Croton oil vesication is one of the methods of treatment of ringworm, the object being to produce just such a condition as the eczema produced in this case. That the campho-phenique exercised a certain amount of influence on the condition is also probable. Being a parasiticide, it, no doubt, destroyed any lingering spores; or at least prevented their proliferation.

During the whole course of treatment the head was covered with a close fitting skull-cap made of knit material, this

precaution being adopted for a two-fold purpose—first, to avoid disseminating the parasite; and, second, to prevent external irritants from reaching the scalp, as well as to render less destructive the scratching indulged in by the patient.

Another point I wish to refer to in reference to the last drug employed, is that it prevented suppuration to a great extent and also acted as a local anaesthetic. It acted admirably in this case, as it does in all cases of pustular eczema, and was rapid in its action on account of the general treatment which was added to it. One important feature in the entire treatment was that no washing of the scalp was indulged in except upon two occasions, when tincture of green soap was used.

NOTE.—As it is customary among many to report successful cases and fail to record results observed at some more or less remote period, I take this opportunity of adding this appendix to the history nearly two years after the apparent cure (May, 1890). The boy has grown in height and weight, but weighs comparatively less to his height than when first seen prior to treatment. His scalp is not only perfectly healthy, but he has acquired a splendid suit of hair. He is in better health than he ever was before, a sojourn at the sea-shore last autumn having greatly benefited him. This places the cure of the ringworm beyond a doubt, and the fact that the bald spots have entirely disappeared also proves the suppurative process to have been of that superficial nature characteristic of eczema.

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illowy,
Cincinnati, Ohio.

EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

BY ESPINA Y CAPO, M.D.

It is of the greatest importance that the diagnosis of tuberculosis should be established as early as possible, for it is at this period, when the malady is just making its debut, that treatment is most efficacious, and that we may expect to cure our patients.

The etiological data, whilst heredity and contagion are not under discussion any more, are of very considerable importance as first elements of diagnosis.

With the data furnished by etiology Dr. Y. Capo passes in review a group of symptoms which, carefully studied, will stimulate us to search for and enable us to find commencing tuberculosis.

The perimetre of every thoracic cavity that does not equal half of the girth of the individual should cause us to suspect this malady; great sinking in of the clavicular fossa, certain prolongation of the antero-posterior diametre of the thorax, great decussation of the intercostal spaces, and accentuation of the trapezo-clavicular triangle are likewise symptoms of a defective respiration of the summits of the lungs.

At this period there is as yet no cough, but the slightest provocation may call forth a paroxysmal fatiguing cough, gutteral, with a sensation of tartness, if it be the larynx that is first affected, and the laryngoscope will show us on a pallid mucous membrane ecchymoses and grameliform eminences. If it be the lung that is affected, *the cough manifests itself by dry paroxysms with but very little sero-mucous expectoration*. This cough is intermittent, and coincident with development of each tuberculous germ. Cotemporary with these symptoms there appears a *dyspnoea of exertion* which disappears on rest. Another form of dyspnoea is *migraine of oppressive form*. Vasomotor modifications manifest themselves under certain circumstances in the cheeks, under the form of transitory *red plagues*.

Already at this period percussion shows a *tonality more sharp* than normal, and auscultation discloses a rude respiration, difficult with an active expiration; at the same time there appears concurrently with the dyspnoeas already mentioned *a permanent acceleration of the respiratory rhythm*.

Later on appear the indications of disturbance of the general health, the menstrual troubles in the females and the dyspepsia, one of whose fundamental characteristics is a want of appetite, a peculiar taste for food at low temperatures (*cold victuals*).

If we add to these signs, hemoptysis, examination of the pulse and of the temperature, we have a fasciculus of probabilities sufficient for diagnosis, and especially the formulation of an energetic treatment at a period when pulmonary tuberculosis is certainly curable; a period which, in the opinion of the author, precedes the catarrhal period with expectorations, the stage usually regarded by the authors as the first. From this point of view the work by Dr. Capo is of the

greatest interest for medicine, and certainly for patients, especially at a period when medicine tends to become the science of prophylaxis.—*U. Med. de C.*

BULBO-CAVERNOUS REFLEX.

By this name Dr. Onanoff proposes to designate the brisk contraction of the ischio and bulbo-cavernous muscles which determine in man the normal mechanical excitation of the gland.

The clinical researches which he has made on this phenomenon permit him already to establish certain considerations of real value in the prognosis and the diagnosis of certain nervous diseases.

To this exploration he proceeds in the following manner: the index finger of the left hand being placed upon the bulbous portion of the urethra, with the right hand the dorsal surface of the gland is rapidly stroked with the edge of a piece of paper, or, in addition, the mucous membrane is very lightly pinched. Under these circumstances the index applied on the region of the bulb perceives a more or less intense shock, which is in relation with the contraction of the ischio and bulbo-cavernosus.

The results furnished by a study of this new sign are as follows:

In sixty-two adults considered as healthy, or at least exempt from any appreciable neuropathy, the bulbo-cavernous reflex was never found wanting.

In old persons who have lost their vitality, the reflex in question is abolished, or at most barely perceptible.

In three cases of *vulgar haemiplegia*, so long as the genital functions were not affected by the malady, the reflex was normal and without exaggeration.

In two cases of *transverse myelitis* situated about the superior lumbar region, the reflex was manifestly exaggerated; in these two cases erections occurred unknown to the patient, who only became aware of them by chance as it were.

In *progressive locomotor ataxia* it can be said at once that, as a general rule, the urinary troubles do not seem to influence in any way the bulbo-cavernous reflex.

On the other hand, when the reflex is present in these patients, their sexual functions are preserved intact or exaggerated, whilst, when abolished, they never have complete erections. Nevertheless it has happened that in certain

tabetics the genital functions have greatly diminished in force, whilst the reflex remained in tact. Under these circumstances the impotency will only be temporary, and the re-establishment of the function under the influence of treatment (suspension) is the rule. If, however, with the enfeeblement of the sexual function there is abolition of the reflex, we can readily foresee that the impotency will be permanent and the treatment without effect.

It results therefrom that, in this category of patients, the presence or absence of this sign is of great importance for the prognosis of the genital trouble. Dr. Onanoff adds that he deems it prudent to formulate some reserves in view of the small number of observations (thirty-four) of ataxics. Lastly, this sign can aid us in the diagnosis of certain cases of impotency of difficult pathology, as we observe in persons suffering from urinary troubles, from hemorrhoidal disease, and the diverse neuropathics. In all these cases, in fact, the bulbo-cavernous reflex is never wanting, and the genital functions are restored under the influence of treatment applied to the principal malady. The author cites on this point a very instructive fact. In a case of saccharine diabetes, with loss of patellar reflex and abolition of the genital functions, the bulbo-cavernous reflex persisted, although feeble. When later on, the diabetes improved for some days under the influence of treatment, the bulbo-cavernous reflex gained in force, and at the same time the patient acknowledged the return of his sexual powers.

In nine cases of neurasthenia with complete or partial loss of the genital functions, the bulbo-cavernous reflex was present in every one.

It is not without interest, the statement that the reflex is not dependent upon the sensitiveness of the mucous membrane of the gland; a very exaggerated reflex is noted in certain tabetics, in whom this sensitiveness of the mucous membrane is very much blunted. The voluptuous sensation is altogether wanting in these patients, although erection is complete and persistent.

In resume. 1st. There is in man in the normal state a reflex which we may call the "bulbo-cavernous reflex."

2d. In the cases of disturbance of the genital functions:

(a). The presence of the reflex will indicate a dynamic origin and allow us to make a favorable prognosis.

(b). The absence of the reflex will be the sign of an organic lesion and entail a grave prognosis.—*La Tr. Med.*, May 8th.

Selections.

Sick Headache.

BY WILLIAM H. MAY, M.D.

ONE of the most common and most distressing of human ills is headache. Some individuals have an inborn tendency to this complaint, and neuralgia in its various forms is among their most frequent afflictions—that located in one-half of the head is the most common of all. Sick headache is in reality a form of neuralgia. It is entirely independent of any disturbance of digestion, although generally considered to have its origin in some defective action of the stomach; and it is true that its symptoms are often aggravated as a result of errors in diet. The first attack occurs during the period the body is developing, and it seldom shows itself for the first time late in life. At first it may be noticed that the pains are confined to one side only, but as the attacks gain frequency and severity, it is apparent that they are limited to the distribution of one nerve, or a single branch of it, generally in one eye or half the forehead. It is possible for both sides to be affected at once or in alternation, but these cases are rare.

There are two well-marked varieties of this disorder, which differ in symptoms and methods of relief, and are known as the congestive and the anæmic forms. The so-called bilious headache may exist with either.

The congestive variety is a very frequent affection, especially among those who overtax the brain and take too little outdoor exercise; and its most prominent symptom is insomnia, indicating cerebral congestion. Even when the pains are not severe, it is generally felt most of the time. It may be so intense that the sufferer is unfit for any mental or physical exertion, or it may be only a dull ache, which is extremely annoying.

In the anæmic variety the cause is a deficiency in the amount of red globules of the blood, as shown by the palleness of the face and lips. The pain is situated in the higher parts of the head and forehead. There is a tendency to faint on prolonged exertion, or sudden shock to the feelings,

such as frights, etc. Sometimes it is of the peculiar character described as hysterical.

In either variety of this affection, we find that if the pains last long and are intense, nausea and vomiting are certain to occur. The pain is at first made worse by the efforts of nature to relieve the stomach, but these mark the worst period of the attack, and are followed by relief and sleep. When the patient awakes the pain is generally absent, but if the attack has been a severe one, there is a feeling of soreness and tenderness over the skin of the parts affected, and this may last for a day or two. The attacks may begin with a chilly sensation, yawning and sighing, like the beginning of a malarial attack, but the other signs of malarial poison are absent, and the remedies that control ague do not cure sick headache. Many patients of this kind see peculiar appearances of light before the eyes that have no existence in fact, and are known by the victim to be symptoms of the coming headache after he has experienced them a few times. These are fiery circles or sparks, or a spiral glimmer seems to present itself to the vision. In congestive headache we find the affected side of the face is reddened, hot, and manifestly more full of blood than the other side. The white of the eye is reddened, the tears are secreted more abundantly, and the pupil on that side is contracted. The pulse may be remarkably slow in this form, running as low as forty-five beats per minute. In the other variety we find the affected side of the face is cold, pale, and shrunken, the pupil of the eye dilated, the eye itself being sunken, and coughing, sneezing, etc., increase the pain. If pressure be made upon the carotid it also increases the pain, while in the first variety the effect is exactly the reverse. As the attacks pass off, the face resumes its natural appearance. This disease may continue to appear in paroxysms during the entire life-time, but the attacks are further apart and less severe after the period of middle life is passed. The duration may vary from a few hours to several days. The intervals are usually free from pain, and the prospects of permanent cure are not very good, as the treatment of sick headache has as yet never produced many brilliant results. This is especially true where there is a distinct history of a hereditary nervous tendency existing in the ancestry. Many cases can be helped only temporarily. In the congestive variety ergotine is sometimes very efficacious. The bromides are also invaluable in the treatment, especially bromide of lithium,

which will produce sleep and rest to the brain in smaller doses than the others. Ice applied to the nape of the neck, abstinence from alcoholic liquors and tobacco, exercise in the open air, etc., are also indicated. In the anaemic form, nitrate of amyl in small and frequent doses will often cut short an attack, to be followed by the administration of ferruginous tonics. The galvanic form of electricity sometimes relieves, and if continued for a time may effect a cure. But there is a vast deal claimed for this agent by its enthusiastic advocates that can not be verified by the most competent operators who are not carried away with a monomania on the subject. Cannabis indica given persistently produces a cure in some cases. Inhalation of chloroform and ether are too dangerous to be entrusted to the sufferer for self-administration. The same can be said of chloral, cocaine, and the various forms of opium, such as morphine, etc., as their continued use may lead to the formation of habits destructive of both mind and body. Caffeine, the active principle of tea and coffee, is a safe and efficacious remedy for the patient to use. In its combinations with other chemicals it usually moderates the attack at once, and may cut it off entirely if taken early. The hysterical headache, in which the pain is confined to a very small point, such as can be covered by the tip of the finger, can be relieved in the same way as the others by the application of similar remedies; but in attempting to produce a permanent cure, the treatment should be that appropriate for hysteria in general. All sources of nervous exhaustion should be removed, the best of diet and moral influence should be given, and every means taken to insure exercise without fatigue, and effective digestion; this treatment to be continued a sufficient length of time to show that all symptoms have disappeared and the causes removed. Like all the neuralgias, as the renowned Anstie has well said, "it is the cry of the starving, suffering brain and nerves for healthy blood, and they are caused by the presence of the poisons in the blood, derived from the growth of diseased germs which irritate and burden the brain, so that it can not act in the natural way." Early in this affection it is often difficult, if not impossible, to say what the headache means; but close observation for a few days generally clears up all doubts.—Wm. H. May, M.D., in *Med. Tribune, Med. Rev.*

On the Treatment of Fistula in Phthisis.

MR. HERBERT ALLINGHAM read a paper dealing with the treatment of fistula in patients suffering from phthisis. He referred to the recent information obtainable on the subject, and to the contradictory nature of the recommendations made in the text-books which treated of the subject. He, however, made an exception to this remark in favor of the opinions set forth in their respective books by the President (Dr. C. T. Williams) and by Dr. Douglas Powell. The author then discussed the peculiarities that distinguished fistula occurring in phthisical patients from ordinary traumatic fistula. He suggested that, from an operative point of view, fistula in phthisical patients might be divided into three classes : 1, Fistula in conjunction with active tuberculosis. 2, Fistula in conjunction with chronic phthisis. 3. Strumous fistula. He described these three varieties and the proper treatment in each condition. The author approved of active treatment in the second and third varieties, and he insisted upon the importance of choosing an appropriate time and place for operating. He deprecated active treatment while the cough was troublesome, and advised that the patient should not be allowed to remain in the strictly recumbent position, in order to avoid any tendency to lung mischief of a mechanical origin. He preferred chloroform to ether in the operation for fistula, and recommended caution in imparting the information as to the existence of a fistula to the phthisical patient, who was liable to become very despondent when told that it could not be operated upon.

The President observed that a discharge, if not excessive in amount, often proved beneficial, so far as the lung trouble was concerned, and he mentioned instances in which marked improvement had taken place consequent on the formation of a fistula, and, conversely, cases in which the closure of a fistula had been followed by a recrudescence of the pulmonary symptoms. He said they were in the habit of measuring the chances of the patient by the extent to which other organs than the lungs were involved, as, for example, when enlarged or suppurating glands were present. At the same time, he would advise operative treatment if the condition of the fistula were such as to worry or irritate the patient, though he would be careful to lead

the patient to expect some augmentation of the lung symptoms.

Mr. Marmaduke Shield said that each case required to be taken on its merits in regard to the propriety of operative interference, and he pointed out that existence of fistula in phthisical subjects was usually associated with patches of tuberculous ulceration in the rectal mucous membrane. Moreover, the edges of the sinuses were seldom healthy, and healing could not be expected to take place in a satisfactory manner unless special attention was paid to scraping the surfaces and removing unhealthy granulations. He insisted upon the value of iodoform as a dressing in these cases. He attributed the rapid change for the worse which had been observed to follow operations, whether for fistula or the removal of caseous glands, to systemic infection, from bringing the raw surfaces into contact with tubercular matter which ought always to be carefully removed.—*British Med. Jour., Med. Rev.*

Hypnotism as a Medical Agent.

THERE is little to be said in favor of hypnotism as a toy to be used in the production of curious and amusing results, as where the "professor of mesmerism" gets a number of people upon the stage and makes them go through a series of antics for the delight of the audience. That people should be willing to be made to appear ridiculous in public is one of the mysteries of human nature; nor is it much better with the private exhibitions which it is now quite the fashion to hold in the drawing-room whenever a company of people is put to it for an evening's amusement. More than once has it happened that it has been found that the unfortunate subject could not be aroused from the trance, and the mesmerizer has been horrified to find that he could not undo what he had done. Cases are rapidly multiplying where the hypnotic state has been followed by severe attacks of hysteria or other nervous disorder, and it has been forbidden to practice it for exhibition in Austria, Germany, Italy and several other countries.

The anaesthetic effects of hypnotism were brought to notice a few years ago by experiments in the lying-in wards of hospitals, where it was shown that some women can go through labor in the hypnotic sleep and feel no pain. This

has been tried sufficiently often to show that it is an unquestionable fact, and furthermore that it does not lengthen labor or add in any way to the danger of parturition. It was supposed by many that this use of hypnotism was a novelty, but as a matter of fact it was merely a revival of an old discovery. As long ago as 1845 an East Indian surgeon named Esdaile performed many painless operations under hypnotism, including even some amputations. The original discovery of this painless method happened to come just before ether and chloroform, and was lost sight of in the greater interest awakened by these agents.

A correspondent of the *British Medical Journal* of April 5 tells of an interesting exhibition of the anæsthetic effects of the hypnotic state, given in the presence of some sixty medical men and dentists at Leeds by Dr. Milne Bramwell. A number of teeth were drawn, a large lachrymal abscess was opened and scraped, tonsils were removed and other operations performed upon patients put into the hypnotic state by Dr. Bramwell. In no case was there any evidence that pain was felt. One case was particularly interesting because it showed the possibility of bringing a person under hypnotic influence at a distance. A girl presented herself with the following letter:

"Dear Mr. Turner: I send you a patient with enclosed order. When you give it to her she will fall asleep at once and obey your commands.

"J. MILNE BRAMWELL."

"Order.—Go to sleep at once, by order of Dr. Bramwell, and obey Mr. Turner's commands.

"J. MILNE BRAMWELL."

Immediately after reading the letter the girl fell asleep, and remained so during the operation, which consisted of the removal of sixteen stumps. She awoke smiling and said that she had felt no pain, nor did her mouth pain her after awakening, a circumstance that is much to be wondered at. One patient exhibited was said to have been cured of drunkenness by hypnotic suggestion. Among those operated upon were several stout laboring men, who did not look in the least like promising subjects for mesmeric experiments.

In the light of such a demonstration as has just been described, it must be admitted that hypnotism is destined to take an important place among therapeutic measures. The

medical profession is notoriously slow in adopting new procedures, and shows great reluctance in taking hold of this new agent, a reluctance which will doubtless be looked upon as something incomprehensible in a few years when hypnotism is in general use. No doubt much of this hesitancy and indifference on the part of the profession is due to the fact that mesmerism has for years had a bad name, and has been looked upon as a piece of charlatanry.

Although anaesthesia is the most valuable medical property of hypnotism, it is by no means its only one; hypnotic suggestion has been successfully used for the relief of a great number and variety of affections, some of which are difficult to reach by drugs or other therapeutic agents. For instance, bed-wetting by children, seasickness, drunkenness, stammering and masturbation have all been cured or relieved, and some of these troubles have proved insoluble therapeutic puzzles hitherto. The experiments in the treatment of drunkenness and masturbation do not date far enough back to warrant the claim that cures have been effected, but there is no question that temporary relief has been obtained in a number of instances, and it would appear necessary only to repeat the suggestion in order to prolong the effect indefinitely. Those who are interested in knowing how to apply hypnotism, and what may be done with it, are referred to a series of thirty-five cases treated by hypnotic suggestion by Dr. Hamilton Osgood, of Boston, and published in the *Boston Medical and Surgical Journal* for May 8, 1890.—*Editorial in N. W. Lancet.*

Special Hospitals for Tuberculosis.

DURING the past few years the belief that the bacillus tuberculosis is the cause of consumption and not its result, has obtained so firm a hold in the minds of most advanced medical men, that the prevention of consumption by the isolation of persons suffering therefrom has become an important subject for discussion, not only among physicians but amongst those of the laity who are actuated by sufficiently philanthropic motives to be interested in the prevention of disease in their fellow men.

Not only is this true, but tuberculosis affects the rich and poor with such equal frequency and with such fatal effect, that every man, woman, and child, in almost every part of

the world, is forced, by necessity, to pay attention to its ravages.

Experiments recently carried out under the direction of Professor Koch, of Berlin, which have been supplemented by others performed in other portions of Germany, England, and this country, all show that the mortality of consumption amongst nurses taking care of such patients is much greater than amongst a similar class in charge of non-tuberculous inmates of hospitals. It has also been proved that it is possible to scrape the walls of a room in which a tuberculous patient has lived, and with that dust to produce tuberculosis by inoculation in rabbits, and we are speedily finding that the "white plague" of phthisis is to be prevented by isolation and hygienic measures. Further than this, it is not going too far to express the hope that scientific medicine may eventually crush out this disease as it has already limited the ravages of smallpox by the practice of vaccination.

In this city attention has been called to this subject very recently by the exhaustive and very able paper read before the College of Physicians by Dr. Lawrence Flick, in which he discusses the subject of hospitals for tuberculosis, and describes the buildings and methods of administration of the various hospitals of this character which are found in England and on the Continent. He also dwells upon the importance of the establishment of hospitals for consumptives in this country, and we agree with him perfectly in the assertion that physicians and hospital superintendents have no right to place in the same wards with other cases persons suffering from pulmonary tuberculosis.

At the same time so many cases of this disease seek admittance to hospitals, and need medical care in many cases so acutely, that it is practically impossible to exclude them from the general hospitals so long as no special hospitals exist.

In view of these facts, it seems to us that a pressing need exists for the building of an institution of this character, and we can but express the hope that many of the charitably inclined people of this city will remember the necessities of this very large class and provide for them either during their lifetime or in their wills.—*Philadelphia Medical News*.

Tuberculosis from Infected Milk.—A Case.

DR. ERNST gives the following case of transmission of tuberculosis through the use of the milk from a tuberculous cow. The history was communicated to him by a veterinary surgeon in practice in Providence, R. I.:

"Mr. W., June 15, 1878, called me to see a white and red cow. Coughs, and is short of breath and wheezes. Pulse 60; respiration 14, and heavy at the flanks; temperature 104.0. Diminished resonance of right lung, but increased in part of the same. Emphysematous crackling over left lung and dullness on percussion. Diagnosed a case of tuberculosis and advised the destruction of the animal.

Dec. 12. Cow in a cold rain a few days ago for about two hours. Milk still more diminished than at visit made on September 25. Again advised the destruction of the cow. Family still using the milk. Respiration 20; pulse 25; temperature 104.60.

Feb. 22, 1879. Temperature 104.80; respiration 26; pulse 68. Losing flesh fast. Milk still in small quantities. Advised as before, to destroy the animal and not use the milk.

May 30. Called in a hurry to see the cow. Is now as poor as could be. No milk for a week. Pulse 80; respiration 40; temperature 106.0. The cow died in about three hours. Autopsy made fourteen hours after death; lungs infiltrated with tuberculous deposit. Weight of thoracic viscera 43.5 pounds. Tuberculous deposits found in the mediastinum, in the muscular tissues and in the mesentery, spleen, kidneys, udder, intestines, pleura, and one deposit on the tongue. The inside of the trachea was covered with small tubercles.

In August, 1879, the baby was taken sick, and died in about seven weeks. On post-mortem of the child there was found meningeal tuberculosis-deposits all over the coverings of the brain and some in the lungs.

In 1881 a child, about three years old, died with, as it was called, tuberculous bronchitis. And in 1886, a boy, nine years old, who for three or four years had been delicate, died with consumption—"quick," as it was called.

So far as known, the family on both sides have never be-

fore had any trouble of the kind, and the parents were both rugged and healthy people, and so were the grandparents—one now being alive and sixty-eight years old, and the other dead at seventy-eight.

Wounds of the Abdomen.

BY AUGUSTUS C. BERNAYS, A.M., M.D.

PROF. IN ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS.

BEFORE me I have a short review of the surgical part of Vol. III, of the report of the sanitary service during the Franco-Prussian war, compiled under the direction of the officers of the German War Departments. The review is exceedingly unsatisfactory. It was published December 21, 1889, in the *Centralblatt fuer Chirurgie*.

There were 5,743 wounds of the abdomen, of which 4,143 did not involve the peritoneal cavity, while 1,600 penetrated into this cavity. Of the non-penetrating wounds only 364—8.8 per cent. were fatal, while of the perforating wounds 1,111—69.4 per cent. ended in death. It is not stated that laparotomy was performed in any of the 1,600 cases, and I am inclined to believe that this operation was not resorted to during this war in cases of gunshot wounds of the abdomen. During nearly five years spent in German universities as a student, and during a visit of several months last year, I heard no mention of this practice, although in daily association with those surgeons who would have known of these operations. A perusal of the report, which is not at hand in the original, would leave no doubt on this point. The reviewer makes the point that since perforating wounds of the abdomen cause death so very quickly, either on account of shock, hemorrhage, or peritonitis, the antiseptic method would probably not change the rate of mortality very materially. He calculates that 57.2 per cent. died during the first three days following the injury. The result of a careful consideration of all the cases leads the author to formulate the rule, that surgical interference should be limited to a careful cleansing of the wound and its surroundings and an antiseptic dressing, *du reste*: opiates, abstention from food per os and rest. The reviewer (Richter) agrees to this rule for the majority of cases occurring in military practice.

Nimier in the *Archives de med. et de pharmacie militaire*, 1889, No. III, states that in the Tonkin war there were seventy-two penetrating gunshot wounds of the abdomen, with fifty-four deaths. This is a percentage of recoveries of twenty-five. The eighteen cases that recovered were treated by the "expectant opium method." The author admits that in some cases the penetrating character of the wound was not proven beyond doubt. This being the case, we must assume that the mortality was above seventy-five per cent.

A statistical table of 110 cases of gunshot wounds of the abdomen in which laparotomy was done appeared on January 4, 1890, in the *Journal of the American Medical Association*. The author, Dr. Thomas S. K. Morton, finds a mortality of 67.27 per cent.

In a private note from Dr. W. B. Coley, of the New York Hospital, to me, he finds thirty-eight recoveries in 125 cases, a mortality of 69.6 per cent. following operative interference.

The Messenger case above described would undoubtedly have been recorded by any casual observer as a perforating shot wound of the most serious kind. Knowing the close range, the caliber of the weapon and the point of entrance, visceral injuries would appear to be almost inevitable, yet a more careful examination made their existence very doubtful and even improbable. In the German table of 1,600 cases are included 1,291 in which data in regard to the degree of injury, and even of the location of the wound are entirely wanting. 902 of these cases died—69.9 per cent., leaving 389 patients who recovered, and about whose wounds nothing is known beyond the fact that their names were entered on the lists as having a perforating wound of the abdomen. We can not examine into the qualifications or conscientiousness of the persons making the entries, but it is highly probable that a large number of those cases in the bustle and turmoil of the field service could not be carefully examined, and instantaneous diagnoses were entered on the lists, perhaps often by assistants or orderlies. I think then that the percentage of recoveries from penetrating gunshot wounds of the abdomen is given considerably too high; in other words, an unknown number of the 389 patients did not have *perforating* wounds of the abdomen. The author of the report feels the inaccuracy of the records upon which his statistics are based, and where he finds

thirty-three cases of wounds recorded, in which there was only a wound of the peritoneum without injury to the organs, he feels constrained to make the remark that in some of these the existence of an injury to the organs can not be denied with certainty. The remark applies to cases in which there were some positive written hospital records. How much more probable are mistakes in diagnosis in the 1,291 cases, or rather in the 389 who recovered, where there are no data at all. I can not believe from the evidence before me, that thirty per cent. of penetrating gunshot wounds of the abdomen will recover without laparotomy, more especially if there is visceral injury, and if the missile be of such calibre as was used by the French army in 1870. My own experience of five operations proves to any candid and honest critic that under the expectant plan of treatment by non-interference, the record would have shown five deaths. Under the aggressive plan followed by me, this mortality of 100 per cent. was lowered to forty per cent.

Every surgeon will also admit that my cases, excepting the first one, were bad cases, and indeed cases Nos. II, III and IV, all of which recovered, were perhaps as grave, and as badly injured, as any successful cases that have been recorded.

If the publication of these cases and results will serve to encourage my co-workers in the field of abdominal surgery to renewed efforts in cases of gunshot wounds of the viscera, and if the description of my operations and after-treatment will serve to throw a little more light on this most difficult department of surgery, my object in publishing this paper shall have been achieved.—*St. Louis Med. and Surg. Journal.*

Belladonna, Locally applied as an Anti-Galactagogue.

M. W. LEAVIT^T. M.D., (*Mass. Med. Journal*) says:

Mammary abscesses resulting from over-distension of the lactiferous ducts is of frequent occurrence, and is alike a source of suffering to the patient and annoyance to the attendant. Every practitioner is familiar with the difficulties attending the management of the mother on the loss of her child, either on parturition or subsequently, in securing prompt and systematic removal of the lacteal secretion either by natural or artificial aids, until the functional

activity of the organ is arrested or gradually ceases. It also occasionally happens that the mother, in attempting to wean her child, finds the established physiological activity of the mammary gland so persistent, that secretion continues even when its natural stimulant, nursing, is discontinued, so as to be productive of inflammation and suppuration. For some years I have been in the habit of using belladonna, applied locally, for its anti-galactagogue effect, and thus used have found it of signal benefit. My method of application is as follows: I cut out a circular piece of belladonna plaster of sufficient size to cover the breast, with a hole in the center about an inch in diameter for the nipple.

I have never failed in arresting the lacteal secretion by this method, when the plaster has been of good quality and its adhesion to the integument perfect. It was a question in my mind whether the relation between the lacteal secretion and the physiological diminution in the tissues of the uterus following labor, was of such a nature as to unfavorably affect the health of the person were this function prevented or arrested; and I am happy to state, so far as I have observed, I could discover no injurious results. During the period of *allaitement maternal*, I consider the local application of belladonna of doubtful propriety, when used in threatened mammary abscess from over-distension of the lacteal vessels, owing to the danger of absorption into the mother's system, and its toxicological effect being produced upon the child through its mother's milk. One such case of poisoning has been reported within the past few months. While proper precautionary care will almost always enable us to avoid mammary abscesses from the causes already mentioned, they are nevertheless frequently met with from neglect or lack of knowledge of either the attendant or the patient. I consider belladonna a valuable therapeutic agent in cases like those here narrated, and I ask such members of the profession as have not thus used it to give it an impartial trial.

Medical Matters among Alaska Indians.

DOCTOR ARNOLD, Assistant Surgeon in the U. S. Navy, writes from Sitka to *The Southern Practitioner* an interesting account of his observations of the medical customs of the natives of Alaska. He says:

"Judging from this ranche or village, which is by far the most enlightened one in the whole Territory, I should say at least half of them are suffering from either cold abscesses, caseous lymphatic glands, hip-disease, Pott's disease or pulmonary tuberculosis. I have met as many as fifteen Indians in whom one of these disorders was evident at a glance, in half an hour's walk, along a beach a mile away from their village. This condition of affairs, coupled with a high relative sterility, explains the undoubted decrease that this village has undergone since the 'turnover,' which is the Alaskan epoch."

Acute lobar pneumonia he describes as neither very frequent nor very severe. Dr. Arnold saw several cases and found the pneumococcus of Friedlander in the sputum. From unprofessional sources he heard of the disease farther north, and he thinks Loomis' assertion that pneumonia is unknown in Polar regions is incorrect.

The following observations are also to be found in his account:

"These Indians all use hot water, both for its local and its haemostatic effects, and they resort to multiple punctures for injuries and chronic inflammatory troubles. The average Indian will submit himself to a severe surgical operation with alacrity, set his teeth in a bit of soft wood, and give little evidence of the pain he must feel.

"Their therapeutic agents are rather limited, so far as I have learned. They use the inner bark of the devil's club, a sort of thorny shrub, as an emetic and purgative, and assert that the mode of its action is determined by the direction of strokes of the stone with which they scrape it off. If they are made upward, it produces emesis, and *vice versa*. They claim an efficient abortifacient, but I have not yet seen the source of it.

"Their diet is largely composed of oil from the seal, herring, or the ooliean, a small fish in these waters. The latter is of reputed efficacy in phthisis, but a careful test of its usefulness has not been made. A reduction of this fat allowance is most probably the chief one of the causes of the great prevalence of this disease in Indians who adopt a civilized life.

"In many of the mission training-schools, where the life of the girls is the most radically changed, it is almost an exception for the menstrual function to be established without the immediate inception of pulmonary phthisis

although another point to be considered is that orphans and girls either actually diseased or strongly predisposed by hereditary influence to constitutional disease, furnish a large number of these pupils.—*Northwest Lancet.*

Remarkable Fecundity.

I WAS called to see Mrs. E. T. Page, Jan. 10th, 1890, about 4 o'clock A. M.; found her in labor and at full time, although she assured me that her "time" was six weeks ahead. At 8 o'clock A. M. I delivered her of a girl baby; I found there were triplets, and so informed her. At 11 A. M. I delivered her of the second girl. After having rectified presentation, which was singular, face, hands and feet, all presented, I placed in proper position, and practiced "version." This child was "still-born," and after considerable effort by artificial respiration it breathed and came around "all right." The third girl was born at 11.40 A. M. This was the smallest one of the four. In attempting to take away placenta, to my astonishment I found the feet of another child. At 1 P. M. this was born; the head of this child got firmly impacted at lower strait, and it was with a great deal of difficulty and much patient effort that it was finally disengaged; it was blocked by a mass of placenta and cords. The first child had its own placenta; the second and third had their placenta; the fourth had also a placenta. They weighed at birth in the aggregate nineteen and a half pounds without clothing; first weighed six pounds; second five pounds; third four and a half pounds; fourth four pounds. In the country, and "backwoods" at that, it was impossible to procure a "wet nurse," so with the little help we could control, and feeding the babies on "Reed & Carnrick's Infant Food," they thrived well. From using all the foods on the market I long since found that the above food possessed some qualities that I failed to find in others. Mrs. Page is a blonde, about 36 years old, has given birth to fourteen children, twins three times before this; one pair by her first husband. She has been married to Page three years, and has had eight children in that time. I have waited on her each time.

Page is an Englishman, small, dark hair, age about 26, weighs about 115 pounds. There was quite an amusing incident occurred when I informed him that his wife would

give birth to four children ; he fell across the bed by his wife's side, threw his heels away up in the air, clasped his legs with both hands, and with wail of despair, cried, "Lord, God, Doctor ! what shall I do ? "

They are in St. Joseph Mo., now, having contracted with Mr. Uffner, of New York, to travel and exhibit themselves in Denver, St. Joseph, Omaha and Nebraska City, then on to Boston, Mass., where they will spend the summer.

The birth of quadruplets is not so remarkable, but that they should live and thrive as these have done, is. In about three hundred and seventy-five thousand births there are quadruplets, and it is a remarkable fact that they always die. Will some of my brother M.D.'s give us their experience with quadruplets?

J. DE LEON, M.D.

Ingersoll, Texas.

Epulis.

BY W. B. ROGERS, M.D., OF MEMPHIS, TENN.

PROFESSOR PRINCIPLES AND PRACTICE OF SURGERY AND CLINICAL SURGERY, IN MEMPHIS HOSPITAL MEDICAL COLLEGE.

THE term epulis signifies a growth or excrescence upon the gum. Any growth, then, coming from or resting upon the gum, would come literally within the scope of this term. Fortunately, however, there are but few affections of the gum liable to be confounded with that particular class of tumors to which the concensus of surgical authority has restricted the term epulis—a solid tumor springing, not from the gum, but from below the gum, from the alveolar, and usually from the periosteal lining of the socket of a tooth.

In a detailed description of the diseases of the superior maxilla, Gross omits mention of epulis, though he describes it at length in affections of the lower jaw. I am firmly impressed with the idea of having seen, in some surgical work, a statement that the lower jaw is exempt from the disease. Again, it is estimated that two cases occur in the superior to one in the inferior maxilla. It has, however, been my fortune to meet with, in both superior and inferior maxillas, well-marked epulis.

Epulis is a solid tumor, varying in size from a pea to a

hen egg, firm and fibrous to the touch—usually appears between two of the teeth, which are gradually raised and separated from each other by the red, smooth, glistening growth. The tumor is more or less constricted at its junction with the gum in some instances, and again has a broad base; it expands, grows laterally as well as grows from the gum. It is painless to manipulation, but soon interferes with mastication; and while the surface is unirritated, the mucous membrane has the appearance of health, though if frequently impinged on by the teeth of the opposing maxilla, it becomes abraded, and even ulcerates and bleeds.

The tumor expanding at its base separates the wall of the tooth socket; destroys the alveolar by absorption, and even burrows down into and expands the bone, on which the alveolar is situated, to a shell. The teeth are loosened. But it is astonishing the minimum degree of pain experienced during the destruction in some cases of a considerable amount of osseous tissue.

Early adult age seems most prolific in the type of tumors to which epulis belongs, but of the few cases that have come under my observation, the ages ranged from thirty to fifty-two years—the oldest subject being the only one which has thus far succumbed to the disease, and he, though seen shortly after the appearance of the tumor, declined any operative interference.

Diagnosis.—There should be little if any difficulty in determining between an epulis and other affections of the gum, as in any other tumor from hypertrophy elsewhere located. The non-cystic nature can readily be determined by the exploring hypodermic syringe needle. A polyp sometimes occurs on the mucous membrane, but it will have no deeper attachment, while the epulis is a fibrous type of tumor connected with the periosteal covering of the bone. Vascular and warty growths need not be considered in a differential diagnosis. Seen in its infancy, epulis is distinct, and even when far advanced and ulcerating, does not resemble epithelial cancer.

Cause.—As far as my researches go in the literature on this subject, there seems to be a uniformity of belief that this growth is due to the irritation caused by diseased teeth. Salter even alleges that in cases where the tumor appears on an odontulous gum, it will be found that though the

teeth have been extracted, there has been left behind a carious root.

It may not be uninteresting to note the difference of opinion as to the clinical import, and consequently in the difference in operative treatment advised. Salter, in his article in Holmes' *System of Surgery*, and with whom Holmes' recent edition of *Principles and Practice of Surgery*, agrees *in toto*, broadly asserts that epulis is non-malignant from beginning to end; claims that in young, newly-formed epulis it is only necessary to remove the offending tooth—the one next, or maybe one on either side of the growth, and then with the knife excise the epulis, and a cure results. He emphasizes the point that the epulis is dependent on the existence of the alveolar, and the removal of the teeth is followed by atrophy of the alveolar, which is as effective as when removed by the surgeon. In the cases of longer standing where the growth has spread along the alveolar evenly down to the bone proper, then excision of a segment of the alveolar, and may be, bone on which alveolar rests, effects a cure. This teaching does not agree with any one of my cases of a small epulis, in which I removed the two together with a segment of alveolar, well down to the body of the bone, only to see the growth return at same site within a year. Opposed to Salter and Holmes, we find Gross, Erichsen, Billroth, Cornil, and Ranzier, Hamilton, and the mass of writers teaching that epulis is a recurring tumor, tending to destroy life. They strenuously urge the necessity for thoroughly dealing with the site of origin of the growth—excision of the alveolar together with the epulis, going well into uninvaded tissues, even at the sacrifice of the body of the bone whenever indicated.

Strange to say, those writers who dwell on the non-malignant tendency of epulis, all consent to the same histological characters as are claimed for it by those of opposing creeds. And it seems to be definitely settled that epulis belongs to the sarcomatous group. Sarcomata as a whole have a strong tendency to recurrence on removal. Every tumor containing embryonic elements is looked upon with suspicion.

The alveolar sarcoma stands second only to carcinoma in its tendency to destroy life, while the giant-celled, myeloid sarcoma is the least malignant of the group; to the latter class belong epulis, which is composed of fibrous tissue and myeloid cells, the former predominating, and it would

appear occasionally existing almost to the exclusion of the latter, and again *vice versa*. The greater the preponderance of myeloid cells, the greater the tendency to malignancy. Histologically considered, epulis is a recurring malignant tumor—a sarcoma. Clinically, early removal means a cure. When neglected, the tendency is to destroy life. I beg leave to report four cases and mention a fifth one.

There followed these remarks a report of five cases of epulis which we have omitted.—ED. NEWS.

Microscopy.

San Francisco Microscopical Society.

Reported for the CINCINNATI MEDICAL NEWS by Wm. E. Loy, Recording Secretary.

THE first meeting of the San Francisco Microscopical Society held this month convened at the rooms of the Society, 120 Sutter Street, May 28. The meeting of two weeks ago was abandoned on account of the removal of the library and apparatus to another suite of rooms on the same floor, and members last night expressed general satisfaction with the change.

A considerable portion of the evening was given to routine business and perfecting arrangements for celebrating the twentieth anniversary of the formation of the Society, which occurs early next month. For that occasion an historical paper has been prepared by one of the original members, and its reading will form the chief feature of the evening.

Dr. Montgomery exhibited the eggs of a minute insect, the Chigger (*Leptus Irritans*), sent him by Dr. Fitch. This is a parasite afflicting the human race, chiefly met with in the Mississippi Valley, and its presence causes great suffering to its host. In its habitat it is variously known as "chigger," "jigger," "red bug" and "harvest bug." It makes its appearance in the early summer, about the 1st of June, and continues to annoy human beings until the first frost of the season kills it off. The pests are most active in August, and are found on all kinds of vegetation, but especially on blackberry bushes. They are not likely to be found on cultivated vegetation, and do not thrive well in

wet seasons. They attach themselves to the clothing, and immediately seek a suitable spot on the subject to begin operations. So far as known, they do not infest any other animal, and like the man-eating tiger, the chigger that once tastes human blood will not abandon his prey, but perishes in the vain attempt to devour him.

The female penetrates the skin, and within a few hours' time will have completely buried itself. The body then begins to swell from the formation of eggs, and increases to five times its size. This causes an irritation and swelling, accompanied by intense itching. In Virginia the negroes remove the intruder with the point of a red-hot iron, and then poultice the wound with the universal panacea of the race—a fresh quid of tobacco.

Dr. Bates spoke of his experience with this parasite in Brazil, where they are very numerous. Like many other local parasites, they seem to single out the strangers for their depredations, and foreigners are made very uncomfortable.

After the consideration of *Leptus Irritans* Mr. Riedy and other members gave an exhibition of beautifully arranged slides, prepared by E. Thum, Leipzig. These consisted chiefly of beautiful diatom frustules, arranged in the form of rosettes, or interspersed with butterfly scales, and were shown with transmitted light and dark-field illumination. There was also shown a series of opaque objects, consisting chiefly of variously colored butterfly scales arranged in the form of vases with a bouquet of flowers, and hovering around the flowers a number of bees or humming-birds. When it is considered that these elaborate designs in their entirety are not distinguishable to the naked eye, and that from one hundred to five hundred separate bits of butterfly scales or diatoms enter into their composition, they are simply marvelous works of human handicraft. Another slide of a similar nature consisted of one hundred distinct species of diatoms arranged in rows, and an accompanying catalogue gives the specific name of each. When viewed under the microscope these various preparations exhibit a brilliancy of coloring and perfection of arrangement which can but astonish the beholder.

MEETING JUNE 4TH.

On this evening a meeting was held to celebrate the twentieth anniversary of the Society. We have space for only a

very few of the particulars. Much good work has been done by the organization.

An event occurred in the early history of the Society which is remembered with pleasure by the older members. Early in 1871, Joseph Beck, the eminent London optician, visited San Francisco. On March 14th he gave a reception to the members at the Cosmopolitan Hotel. On this occasion he exhibited a magnificent binocular microscope of aluminium, with all accessories complete. Beside the rare and interesting objects brought with him, he showed others from the Society's collection, among which were individual gold crystals from Owen's Valley, metacinnabarite (then recently discovered), silicified wood, platinum and diamond sands from the coast of Oregon. The exhibition was a revelation to the Society, and the fledglings who had acquired a small stock of scientific terms and could glibly prattle of apparatus they had never seen, maintained discreet silence.

August 30, 1872, the Society was incorporated under the laws of the State of California. Good work was accomplished during 1872, and the Society was full of enthusiasm. The history of the organization shows that its life has been an active one. The large microscope and accessories were purchased at a cost of \$1,500. The first mineralogical paper was read by Guido Kustel (on a peculiar form of silver mineral), and the Society, having gained some notoriety, received its first visit from a representative of the press at its meeting on November 1st.

At the meeting held September 18, 1873, a donation of seaweeds with diatoms attached was received, and this was the first time diatoms were mentioned in any of the meetings. This is an event worthy of mention, because the members of the Society afterward took an active interest in the study of diatoms, and the cabinet is very rich in diatom preparations. Three years later—August 3, 1876—the famous Santa Monica deposit of diatomaceous earth was first brought to the notice of the Society, and so rich in new species did this small find prove, that specialists and learned societies from all parts of the world eagerly sought a small quantity for study.

There have been read at its meetings, by eminent specialists, papers of great value on all subjects pertaining to microscopy. Its work has been recognized and appreciated by kindred societies in America and abroad, especially by

the Royal Microscopical Society of London. It is the intention of the Society to publish its history and proceedings at an early day, including some of the valuable papers read at its meetings.

THE BANQUET.—After Mr. Hanks had concluded a paper upon the history of the Society, from which the facts given above were gathered, those present were invited to partake of refreshments which had been prepared. When all had been refreshed by refreshments, toasts and speeches were indulged in—Colonel C. Mason Kinne acting as toast-master.

THE MICROSCOPICAL EXAMINATION OF BLOOD.—The changes which take place when blood is brought into contact with the atmosphere are very rapid, some of them almost instantaneous in their nature. Hence, blood examined in the usual way may give but little hint of the true condition of the fluid within the vessels. The best fixative of the elements of blood, yet found, is osmic acid in two per cent. solution, as shown by the experiments of Prof. Ranvier, of the College de France. This preserves the relative size, form and structure of the corpuscles and plaques, and does not interfere in the slightest with their subsequent staining, etc. The following is a modification of Ranvier's method of preparing the liquid for examination, (supposing it to be taken from a patient). Wipe the surface of the skin, around the spot to be punctured, with a clean sponge moistened with plain water, and dry with a bit of clean, new, bibulous paper. With a pipette or medicine dropper, deliver on the surface a minim or two of the osmic acid solution in such a manner that the liquid will form a globule on the skin (which it will naturally do if the latter be quite dry). Through this globule make the puncture and let the blood escape directly into the osmic solution. Have ready a small, conical glass or test-tube, containing a drachm or two of the osmic acid solution, and let the diluted blood run directly into it. Two or three drops of blood are sufficient for ordinary purposes. Shake the tube slightly to separate the elements, cover to keep out the dust and stand aside. In a short time the corpuscles will subside to the bottom of the glass, the red ones first. Leave in contact with the acid solution for several hours (anywhere from three to twenty-four), and when ready to

proceed, decant or draw off the supernatant fluid with a pipette.

If a portion of the sediment be now examined, the elements will be found to be perfectly preserved in shape, etc., but the red corpuscles will be somewhat bleached, having a pale brownish color. Subsequent operations will depend on the character of the examination to be made. The following methods of staining the corpuscles may be employed:

After drawing off the osmic acid solution, as above directed, replace it with a saturated solution of picric acid, shake gently and again let settle. As soon as the corpuscles have again found the bottom, which will be in the course of a few minutes, draw off the fluid and add a few drops of picro-carmine solution to the sediment. Let stand for twenty-four hours, draw off and rinse by agitating gently with distilled water. The operation is finished by draining off the water and adding glycerine, carrying from one-half to one per cent. of acetic acid. As examined in this medium the nuclei and granulations of the leucocytes and haemato blasts will appear bright red, while the balance of the structures will remain unaltered.

In the bacterial examination of the corpuscles various coloring agents must be used, according to the nature of the microbes sought. For the malarial bacterium, for instance, Ehrlich recommends methylene blue. Celli and Guarnieri, in their recent monograph, *Sul Etiologia dell' Infezione Malaria* (*Atti della Reale Accademia Medica di Roma*, 1889, page 395), after trying methylene blue, saffranin, Hoffman's violet, Congo red, etc., found dahlia to give the best results.

For tubercle bacillus fuchsin has proven thus far the best and most reliable stain.

Biondi, in a paper in the *Archiv. fuer Mik. Anat.*, a year or two ago, gave the method pursued by him in preparing blood for examination, and making permanent mounts of the same. It was essentially as follows:

Agar-agar is prepared for embedding in the ordinary way, and while still fluid, the blood, after treatment with the osmic acid, is allowed to trickle into it, or is placed in it with a pipette. By rotating the test-tube or vessel containing the agar-agar, a diffusion of the elements is effected, and the whole is then formed in a mould in the usual way. As soon as the mass sets, it is hardened by placing in alcohol of

85°, and kept until hard enough to section (or say two or three days). It is thence transferred to oil of bergamot for twenty-four hours, and thence into paraffin for an hour or two. It is then sectioned as desired. The sections may be stained with nearly any of the staining media, methyl blue, methyl green, safranin and fuchsin giving the most reliable results. They are then clarified in oil of cloves, origanum, bergamot or creasote and mounted in dammar.

As thus prepared and mounted, Biondi declares that nothing is left to be desired. He employed the same method in the study of spermatozoa, and suggests that it can be employed to advantage in investigations in other branches of science—the infusoria, for instance.

Where osmic acid is not obtainable picric acid may be used, but the effect is not so good.—F. L. J., *St. Louis Med. and Surg. Jour.*

Gleanings.

THE THERAPEUTIC EFFECTS OF GRINDELIA ROBUSTA.
—Prof. Bufalini publishes in the *Internationale Klinische Rundschau* the results he has obtained from the administration of grindelia robusta in his clinic at Sienna. He states that the drug has been used for some time past in America as an expectorant and in asthma, and preparations of the plant are incorporated in the Pharmacopœia of the United States. A complete analysis of grindelia robusta has never been published, yet Rademaker has extracted a terpene which in odor resembles turpentine; a resin, which he calls "grindelin," and some substance with an alkaline reaction, which has not been fully examined. Ayers and Gibbons were the first to make any practical use of the anti-asthmatic qualities of grindelia robusta in the treatment of the asthma of bronchial catarrh, when complicated with dyspnoea, and of vesical catarrh. Later on, Bartholow and Buffington observed that grindelia was also useful in heart disease. In their experiments they succeeded in obtaining a diminution of the contractions of the heart, a rise of the blood pressure, and increased frequency of respiration. After the publication of these experiments, Dr. Dobroklonsky studied in the clinic of Prof. Botkin the therapeutic virtues of grindelia in affections of the circulation of the blood, and

he, too, found that the extract has very marked influence on the frequency of the systole. According to this author, the best success is obtained in the treatment of heart disease by combining grindelia with adonis vernalis. Prof. Bufalini has in the last two years repeatedly administered grindelia, and has in many cases of irregular, intermittent pulse, obtained remarkable results with it. He therefore strongly recommends this drug in all cardiac affections in which a regulating effect on the heart's action and the restoration of an arhythmic pulse are indicated. The dose of the extract is from seven to fifteen grains.—*London Lancet.*

LILLY'S IMPROVED GLYCERIN SUPPOSITORIES.—“These invaluable peristaltic persuaders are prepared in a most excellent and improved manner by Messrs. Eli Lilly & Co., of Indianapolis. Their suppositories contain ninety-five per cent. of glycerin, and a beauty of their construction is the peculiar water-proof covering of each suppository, which is readily and easily removed. By simply pressing upon or slightly squeezing the suppository between the fingers, it slips out with astonishing ease, leaving the covering between the fingers. A great improvement, as any one will readily recognize who has ever made the effort to divest one of the ordinary suppositories from its lead foil and tissue paper envelope.”—*Southern Practitioner.*

ON THE TREATMENT OF UTERINE CANCER COMPLICATED WITH PREGNANCY AND LABOR.—In the *Vratch*, Nos. 10 and 11, 1890, pp. 225 and 255, Prof Vasily Sütügin, of St. Petersburg, published an elaborate paper in which he advocates the following propositions: 1. In such cases where *a.* pregnancy is not advanced further than four and one-half months, and *b.* there are present all conditions favorable for extirpation of the womb (such as mobility of the organ, limited lesion, etc.), a possible early removal of the whole uterus with its contents is indicated. 2. In such cases where *a.* pregnancy has reaches four and one-half months or more, *b.* the whole malignant new growth can be removed, and *c.* any marked disintegration of the latter is absent, pregnancy should be interrupted, and after an acute stage of puerperal discharge has passed, the whole womb should be excised. Should there be a pronounced disintegration of the tumor present, Freund Zweifel's operation (*i. e.*, laparotomy, supra-vaginal amputation of the uterus with application of elastic ligature, closure of the abdominal

wound, and excision of the cervical stump through the vagina) must be at once performed. 3. In such cases where *a.* a total removal of the new growth is impossible, and *b.* pregnancy has reached its end, or labor has already commenced, Porro's operation must be invariably (be the foetus alive or dead) performed and the cervical stump fixed after the extra-peritoneal method. The treatment of cancer should be limited to such palliative measures as disinfecting irrigations, plugging with iodoform gauze, etc. 4. In such cases where *a.* labor has set in, *b.* only one lip of the cervix is diseased, and *c.* rigidity of the latter is absent, there are indicated scraping out or excision of the new growth, thorough disinfection of the operation field, and termination of labor by means of version and manual extraction, or extraction with forceps, when the foetus is living, and perforation and extraction with cranioclast, when the foetus is dead. Be the cervix rigid, Cæsarean section should be preferred to all other measures. 5. In such cases as vaginal cancer, where *a.* only small-sized nodules are present and *b.* a sufficient dilatation of the canal may be expected, scraping out the new growth and a thorough disinfection of the vagina are indicated. 6. In such cases of vaginal or pelvic cancer where the malignant disease proves to be very extensive, Porro's operation should be performed.—*St. Louis Medical and Surgical Journal.*

EPILEPSY OF THIRTY YEARS' STANDING.—In an old case of epilepsy of thirty years' standing I used Peacock's Bromides, with marked success and decided benefit. Patient had from three to six seizures usually in twenty-four hours. Under the use of Peacock's Bromides the patient is almost entirely free from further attacks, and otherwise generally improved.

Bay Port, Fla.

J. S. BRUNNER, M.D.

ABSOLUTE REST AND STARVATION IN THE EARLY STAGE OF TYPHOID FEVER.—Dr. R. F. Licorish, of Barbades (*Med. Record*, March 8th, 1890,) in a paper on this subject, arrives at the following conclusions:

1. Typhoid fever may be aborted. 2. To be so aborted the patient must be seen and treatment begun within the first few days of its onset—initial chill. 3. Our chief aim should be to restore the appetite, so that the patient may be nourished and rendered able to throw off the disease. 4. To create an appetite, the patient should be deprived of food until nature demands it; or, if any be given, only in

very small quantities at a time. 5. The maintenance of the horizontal position so retards or prevents heart-weakness as to enable us to starve the patient without any risk. 6. Great care should be taken in feeding the patient after he has regained his appetite; for should it be again lost, the temperature rises and a relapse occurs.

CHLORIDE OF ZINC FOR ENDOMETRITIS.—Polaillon reports on the results of his experience in the use of chloride of zinc in the treatment of endometritis. The remedy is employed in the form of bacilli composed of equal parts of flour and zinc chloride; these vary in size, according to the capacity of the uterine canal, but are generally from two to five millimetres in thickness. The bacillus is held in place by a vaginal tampon. An eschar is produced in a few hours, generally without much pain, and always without febrile reaction. The tampon is removed on the second day, and an antiseptic douche is given. On the third and fourth days the remains of the bacillus and the necrosed tissues are removed, after which the patient is kept quiet for a few days. A single application of the bacillus generally suffices to produce a cure. By the fifteenth or sixteenth day after the application the uterus regains its normal condition; if after this time the secretions continue to appear, a second cauterization is practiced. The author finds abundant reasons to be satisfied with this plan of treatment, and lays stress upon the various advantages obtained, thus no chloroform and no preliminary treatment is required; there is no danger involved in the treatment, and a cure is obtained in most cases.—*Journal of American Medical Association.*

THE SHEET-SLING IN FORCEPS DELIVERIES.—“A simple thing is this locomotive,” said a friend of mine. “We have invented away its complicated parts.” We need to invent away the complicated obstetric devices. Here is a small contribution toward that end which claims not originality, but every-day usefulness.

The crutches devised to steady the flexed lower limbs during operations, do their work well, but are too cumbersome to carry. The plan to which we refer is a satisfactory substitute. A sheet is rolled and passed behind the neck and under the bent knees, and the thighs are flexed as far as possible. The extreme flexion of the knee gives the ham such a solid grip on the sheet, that no sidewise slipping

can occur, and the knees can be adjusted at any distance apart. The patient balances herself. She can not kick. The only assistant required is the one who gives the chloroform and "hands things." It is a good friend in low forceps-deliveries, in breech-extraction, in easy versions, and in restoration of the perineum. Even in the severer cases that are major operations and require ether, operating-table and assistants, it helps. For Sims' position it should go back of the shoulder on the upper side.—*N. Y. Med. Journal.*

"PHARMACEUTICAL SPECIALTIES" IN BELGIUM.—The Liège Medico-Chirurgical Society has addressed a communication to the Belgian Minister of the Interior on the subject of a royal order referring to "pharmaceutical specialties," which was published in March, and which, though admirable as far as it goes, leaves, in the Society's opinion, considerable room for improvement. The other provides that pharmaceutical specialties must bear a label indicating the names of the substances comprised in them. The object of this is to prevent the pharmacist from selling medicines of the composition of which he is ignorant; but it does not apply to specialties sold directly to patients by the pharmacist when he has made them up himself. This regulation, the Liege Society suggests, should be extended so as to include the obligation to affix not only a qualitative but a quantitative label, and to compel all pharmacists, even those who have themselves made up the specialties, to conform to the rule. It is also hoped by the Society that the Government will see its way to a considerable amount of restriction on the pharmaceutical advertisements in political journals. The Society remarks that pharmaceutical specialties intended for prescription by medical men ought certainly to indicate the dose of each component, for the prescriber's guidance. As to those intended for the indiscriminate use of the public, and which are supposed to cure nearly all diseases, the existence of these is objectionable; but if they are allowed at all, the dosage should be clearly indicated. This might, perhaps, operate as a caution to a purchaser, as it would suggest a doubt as to whether the dose was a proper one for his particular case. The exemption from the regulation of the pharmacist who has himself made up the medicine would seem to encourage pharmacists to take upon themselves the functions of medical men, a rôle they are only too apt, as it is, to play. This exemption ought certainly to be abolished.—*Lancet.*

GONORRHEA AND GONOCOCCI.—Neisser (*Arch. fur Derm. ana Syph.*) claims that the gonococcus is the cause of gonorrhea. He has every case of urethritis examined for the gonococcus, and, unless the gonococcus is found, he refuses to call it gonorrhea. He admits that there is such a thing as a purulent urethritis, due to chemical or mechanical irritation; but he claims that these cases do not present the same clinical picture. In doubtful cases, he says it is difficult to recognize the gonococci, for there are other bacteria which resemble them closely.

PHYSICAL EDUCATION OF CHILDREN.—Dr. A. H. P. Leuf concludes a paper in the *Journal of the American Medical Association* in this way:

"I can think of no better conclusion to this paper than a quotation from a former contribution of mine on this subject:

"' 1. The object of physical culture is to develop the material body, and with it, of necessity, the mind and morals.

"' 2. Like most potent agencies, it is much abused, and far too little understood.

"' 3. It absolutely forbids smoking.

"' 4. It absolutely forbids the drinking of alcoholic or malt beverages.

"' 5. It insists upon the necessity of regularity in living, especially as regards time of sleeping, eating, exercise, and recreation.

"' 6. It enforces a good, substantial dietary, that will never be forgotten.

"' 7. It discountenances all kinds of vice.

"' 8. It is rigid in discipline, without assuming so to those disciplined, and develops implicit and willing obedience to advisers.

"' 9. It has a marked effect upon the growth of the body and mind.

"' 10. It develops, to a high degree, the valuable qualities of hope, confidence, courage, deference, obedience when proper, independence, perseverance, ambition, temperance and determination.

"' 11. It is, in short, the most valuable preparation of the young for the cares and trials of adult life, and aids young and old alike to ward off disease, and mitigate its effects."

PROF. DUJARDIN-BEAUMETZ (*Therap. Gazette*, May 15th) calls attention to the happy effect of lactic acid in the GREEN DIARRHOEA OF INFANTS, which is a microbic diarrhoea. It is given in a two per cent. solution, of which a dessertspoonful may be administered every two hours:

Lactic acid,	gr. xlvi.
Orange-flower water,	flj.
Linden water,	fliv. M.

Poisoning by ANTIFEBRIN.—Dr. J. Vierhuff, of Subbath, in Courland, communicates in the *St. Petersburger Medicinische Wochenschrift* the notes of a case of antifebrin poisoning, which are quoted in the *Lancet*, May 24, 1890, and which show what dangers people run who dose themselves with drugs of this class. A healthy young married woman, who had been in the habit of taking antifebrin for headache, feeling the pain come on early one morning last summer, took, fasting, about a teaspoonful of the drug in some water. In about ten minutes, the headache not being relieved, she repeated the dose, which her husband remarked might prove dangerous. She consequently took a glass of milk and some alum water in order to produce vomiting, which she succeeded in doing, but immediately afterward giddiness, singing in the ears, throbbing in the temples and a dull pain in the head, together with a feeling of weakness, came on, and the face assumed a livid hue. When seen four hours after the drug had been taken, the face was a livid color, the lips blue, the pupils contracted, but the heart, temperature and mental condition were normal. An aperient and a stimulant were ordered. Shortly afterward the patient became suddenly collapsed, the pulse could not be counted, and the breathing was very shallow; in fact, the woman seemed to be dying. The soles of the feet were brushed, vinegar was rubbed on the face and cold water sprinkled over the face and chest; also a mixture of camphorated oil and ether was ordered for injecting subcutaneously. While this was being procured several syringefuls of dilute spirits, which was all that could be obtained, were injected, and the patient was brought round, though for three hours and a half her condition appeared hopeless. Then, after recovering somewhat, collapse again came on, and recourse was had to an intravenous injection of a solution of common salt, which appeared to act most benefi-

cially. In about fourteen hours after the drug had been taken the patient was out of danger. After that she continued to improve, though she complained of debility and pain in the limbs for a week. Dr. Vierhuff remarks that the serious symptoms were probably due largely to the patient's taking the antifebrin on an empty stomach.—*Reporter.*

INFLAMMATIONS OF THE MIDDLE EAR.—Dr. L. J. Hammond, of the Ear Dispensary, Philadelphia, in a late issue of the *Philadelphia Medical and Surgical Reporter*, has the following to say in regard to this affection:

"Inflammations of the middle ear are generally the result of an extension of inflammation from the naso-pharynx; treatment of these surfaces should be instituted from the onset of the attack. The nose and throat should be thoroughly cleansed with an alkaline solution, such as Dobell's solution, or:

R	Listerine	f 5i
	Glycerini	f 5 iii
	Sodii bicarb	
	Sodii biborat	aa 5jss
	Aquæ q. s. ad	f 5 iv

M. Sig. f 5i in f 5ii warm water snuffed up the nose, and as a gargle for the throat three times daily.

"The latter I have found very useful in removing the muco-purulent discharge from the naso-pharynx. If in a child, it can be used by injecting it through the nasal canthus with a sponge. After thorough cleansing with the solution, the throat should be gargled with some good astringent, such as:

R	Acid. tannici	5 iii
	Pulv. aluminis	5 ii
	Potass. chloratis	5 i
	Glycerini	f 5 i
	Aquæ q. s.	ad f 5 iii

M. Sig. f 5i in f 5ii warm water as a gargle, t. d.

"If the patient be a small child, small quantities of chloride of potash, mixed with sugar, can be placed in the mouth and allowed to dissolve. The patient's general condition is usually below par, and this state should be met with stimulants and tonics, such as milk punch, beef-tea, tr. ferri chloridi and cod-liver oil. The patient at the same time should be kept in the house, and if possible in bed."

PROF. BARTON COOKE HIRST describes in the *Med. News*, May 24th, the case of a dying woman in the LAST STAGE OF GESTATION, for whom he advised the resident physician in charge of the case, to dilate the cervical canal with his fingers, insert his hand and do a version followed by immediate extraction, surmising, as it proved, correctly, that the tissues of the dying woman could offer no resistance to these manœuvres. The child was born in less than five minutes. He adds that, where the procedure just described is at all possible, he believes it should always be preferred to post-mortem Cæsarean section. By waiting for the mother's death one may lose the infant as well; the post-mortem section is a disfiguring and bloody operation, which would horrify the friends of the patient, and for which their consent could not always be obtained, and, finally, there is the alarming suspicion entertained by the bystanders, if not by the physician, that the woman might not have been dead, but was killed by the operation. On the other hand, version and extraction are as quickly done as section, if one can judge by this single experience; the child is rescued while it is still in good condition; there is nothing repulsive about the operation to the bystanders, and death is not hastened by it.

ELECTRICITY FOR FIBROID TUMOR.—The following conclusions are taken from an editorial on the use of electricity in the treatment of fibroid tumors, which appeared in the *Journal of the American Medical Association*:

1. Electricity will relieve the pain due to pressure and sympathetic disturbances in the majority of fibroid tumors treated by that agent, in from one to six applications.
2. Hemorrhage, due to fibroids, can be relieved by the positive galvano-caustic applications of electricity in all cases in which a sufficiently concentrated dose can be applied to the greater portion of the endometrium.
3. A large percentage of tumors of enormous size can be checked in growth, and often reduced in size, by an intelligent and persistent application of this agent, while tumors of medium and smaller size can be markedly reduced, and, in a few instances, be made to totally disappear.
4. The majority of patients, while under this form of treatment, improve rapidly in general health, from the characteristic tonic effect exerted upon the whole system.
5. According to the only statistics given, eighty-four per

cent. of patients submitted to the treatment are symptomatically relieved, four per cent. absolutely cured, while twelve per cent. are not benefited, or failed to make a fair test of the treatment.

6. The treatment is not by any means painless in a large number of cases, although an anæsthetic is seldom resorted to. A well tried system of concentration, however, has been adopted, by which, as a rule, all the benefits of the agent can be obtained, without transcending the toleration of the patient.

Book Notices.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Volume II. Second Session, held at Nashville, Tennessee, November 12, 13 and 14, 1889. 8vo. Pp. 379. Published by the Association, 1890.

There were present at the meeting of 1889 thirty-nine members. Letters or messages of regret were received from a large number of members who were prevented from attending the meeting. The following Southern States were represented: Tennessee, Kentucky, Alabama, Missouri, Georgia, Virginia, Texas. The following Northern States were represented: Indiana, Illinois, Pennsylvania, New York.

There were numerous papers read, the greater part of which were interesting and valuable. Hunter McGuire, M.D., LL.D., of Richmond, Va., delivered the President's Annual Address. It was a well-digested address, and contained many interesting points. We quote from it the following:

"It may be said with truth that, until of late, the South has not kept pace with the North in medical progress and development. This has arisen from a variety of causes. Prior to the late war, slavery was antagonistic to the development of dense populations; fertile areas were monopolized by the large planter, and he generally occupied more space than his agricultural needs required. He believed in what he called "plenty of elbow room." He was opposed to outside intruders, and desired neither the development of towns nor the growth of cities in his vicinity. Criticise this policy as you may, condemn it if you will, I am not en-

gaged in defending it, but am merely stating patent facts, in order to account for the manner in which it retarded the development of medicine. While this was true, yet this state of society produced splendid men and women, probably the grandest on the continent. Culture, grace, elegance, self-reliance, were its legitimate offshoots. Orators, poets, statesmen, soldiers, scientists, lawyers, ministers and physicians—the first and greatest in the whole land—came out of it. What orator have we like Henry or Yancy, what poet like Poe, what scientist like Matthew F. Maury, what statesman like Jefferson, what jurist like Benjamin, what divine like Hoge, what soldier like Stonewall Jackson, what surgeon like Sims? And the women—how can I describe them! They were as cultured as they were refined, they were as beautiful as they were queenly; the loveliest of sweethearts, the noblest of matrons."

Our space will not permit us to give the titles of but few of the papers read, as Direct Herniotomy, by W. O. Roberts; The Abortive Treatment of Acute Pelvic Inflammations, by Virgil O. Hardon; The Improved Cæsarean Section versus Craniotomy, by W. D. Haggard; Treatment of Ectopic Pregnancy, with Report of a Case, by W. H. Wathen; Menstruation and the Removal of both Ovaries, by G. J. Engelmann; Remarks on Certain Obscure and Minor Forms of Pelvic Cellulitis Simulating Malarial Fever, by Bedford Brown; Laparotomy in Intestinal Obstruction, by Cornelius Kollock.

This volume is highly creditable to the Association on account of the number and value of the papers contained in it. Great praise is due to the Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., for the very neat and tasty style in which the volume of Transactions has been published.

MAY'S DISEASES OF WOMEN, BEING A CONCISE AND SYSTEMATIC EXPOSITION OF THE THEORY AND PRACTICE OF GYNECOLOGY. For the Use of Students and Practitioners. Second Edition. Revised by Leonard S. Rau, M.D., Attending Gynecologist to Harlem Hospital, Outdoor Department, New York, etc. With Thirty-One Illustrations on Wood. 12mo. Pp. 373. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$1.75.

This work is well adapted for the wants of medical stu-

dents, especially those in attendance upon medical lectures. Being thus suited for learners, we have no doubt has led to a call for a second edition.

While the author has endeavored to present a satisfactory exposition of the theories and practice of the diseases of women, yet he has done so in as concise a manner as possible—condensing, classifying, and arranging the matter in such a manner as to facilitate speedy reference and to permit, to a great extent, the reviewing of the essentials of a subject in a very brief period. There are very few works so well adapted as a medical text-book as this one.

The author has no hesitation in asserting the work to be but a *compilation*, embracing a careful resume of the writings of Emmet, Thomas, Mundé, Simpson, Barnes, Playfair, Duncan, Hart and Barbour, Hewitt, Tait, Schröder, Fritsch, etc. In the preparation of the second edition the author, besides the works just enumerated, has consulted Winckel, Lusk, and a number of the leading medical journals.

PRACTICAL, SANITARY AND ECONOMIC COOKING, ADAPTED TO PERSONS OF MODERATE AND SMALL MEANS. By Mary Hinman Abel. The Lomb Prize Essay—Inscription: "The Five Food Principles, Illustrated by Practical Recipes." 12mo. Pp. 190. Cloth. Published by the American Public Health Association. Price, 40 cents.

Mr. Henry Lomb, of Rochester, N. Y., offered a prize of \$500 on practical, sanitary and economic cooking adapted to persons of moderate and small means, as is set forth on the title-page of this volume. For the next best essay he offered \$200. Competition was open to authors of any nationality, but it was required that all papers should be in the English language. Within the specified time of five months *seventy essays* were sent to the awarding committee.

The committee in awarding the prize stated that this one was not only the best, but that it is intrinsically an admirable treatise on the subject upon which it treats. We consider it, in fact, the best popular work on practical, sanitary and economic cooking in the English language, and we are of the opinion that a copy of it ought to be in every family. It is not a book filled with "receipts," but it explains in language which any intelligent person can understand what are the offices of nutrition, what foods contain the most and

the least nutritive elements, how much food an unemployed man needs in order to contend against starvation, what diseases are incident to it. The Esquimaux loves blubber, and eats or swallows immense quantities of it; but how many intelligent housewives can explain why he is fond of it, why he needs it, and what office it subserves with him, while it would soon kill one living in a tropical climate? The book will be found to stimulate thought and encourage the study of cooking problems.

The American Public Health Association, in order to facilitate the introduction of the book into every family of the land, has placed the price at cost. Bound in paper, the price is thirty-five cents—three copies, eighty-five cents.

THE PHYSICIAN'S LEISURE LIBRARY. A Treatise of Neuralgia. By E. P. Hurd, M.D., Member of the Massachusetts Medical Society, etc. 12mo. Pp. 153. Paper. Detroit: Geo. S. Davis. Price, 25 cents.

Education and Culture as Correlated to the Health and Diseases of Women. By J. A. C. Skene, M.D. 12mo. Pp. 127. Paper. Detroit: Geo. S. Davis. Price, 25 cents.

Dr. Hurd treats his subject in nine chapters. 1. General Considerations of Neuralgia. 2. Classification of Neuralgias. 3. Causes. 4. Particular Forms of Neuralgia. 5. Visceral Neuralgias. 6. Reflex and Toxic Neuralgias: Neuralgia Due to a General Morbid Condition. In the ninth chapter the Treatment of Neuralgia is considered.

Dr. Skene in the preface of his work, says that he early became impressed with the fact that a rational management of the young, in all that relates to their physical and mental education, is highly essential to health and efficiency through life. He concluded that to guard against errors of development and growth, gives infinitely better results than all human efforts to subsequently correct the evil consequences of mental and physical imperfections. In view of this he sought for information in medical literature, and there found much that was required, but there was still much that was needed.

While he has not found time to write upon the subject comprehensively and exhaustively, he has embodied in this work much that he hopes will be found of use, hoping that the work will provoke comments and criticisms that will develop still more facts of a practical character.

Editorial.

SURGEON PARKE has been lionized in London to a great extent, and apparently with great justice. Mr. Parke is a modest young man, and has not figured in medicine heretofore; but Stanley gave him most kindly and generous acknowledgments, and Lieutenant Stairs said that Surgeon Parke had saved the life of every white man in the expedition, and had saved the life of Stanley twice. It is gratifying to find that medical services are so highly and justly appreciated. A dinner was given to Mr. Parke on June 6th, at which Sir Andrew Clark presided, and Surgeon Parke was so overwhelmed with compliments that for a time he was too embarrassed to speak. The editors of *The Lancet* have presented Mr. Parke with a massive silver salver.

CONTRACT SURGEONS.—The records of the Surgeon-General's office show that there were 5,532 Contract Surgeons, or, as they were officially designated, Acting Assistant-Surgeons of the United States Army, who served in the War of the Rebellion. The form of entry into the service by these medical officers—many of whom were professors in medical colleges and editors of standard medical books—was not questioned, as their country needed their services, and they patriotically responded to its call in its hour of need, and went where they were ordered by their superior officers, agreeably to the U. S. Army Regulations, which they were sworn to obey like other medical officers. They wore the uniform and insignia of rank of First Lieutenant, and performed precisely the same duties as Surgeons and Assistant-Surgeons, and in a number of instances had charge of United States general hospitals, where their responsibility was very great. Section 4,695 of the Revised Statutes of the United States gives the Acting Assistant-Surgeon the same amount of pension as is given to a First Lieutenant of the military or marine corps; but their only grievance is, that they are deprived of whatever benefits that a legal muster and an honorable discharge would entitle them to.

To this end an act to fix the status of Acting Assistant-Surgeons of the United States Army, or Contract Sur-

geons, who served in the War of the Rebellion, has been drafted as follows:

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled: That all Acting Assistant-Surgeons of the United States Army, or Contract Surgeons who served in the War of the Rebellion, and whose services were honorably terminated, be commissioned as Acting Assistant-Surgeons of the United States Army, the date of contract to be the date of commission and muster into the service, and the date when the service was honorably terminated, or the contract annulled, to be the date of discharge or muster-out of the service.

Provided that any expense attending the issuance of a commission as Acting Assistant-Surgeon of the United States Army be borne by the applicant for such commission.

WHEN JUDGES DIFFER.—It has often been pointed out that though the phrase "doctors differ" is so commonly quoted as a reproach to the medical profession, it is one which, both in its origin and its true application, refers at least as much, if not more, to experts in the law, engineering, and in other so-called exact sciences. The Lord Chancellor (Lord Halsbury), speaking at the Mansion House not long ago, went so far as to make it a particular merit of the judges, and one of their claims to the public esteem which they so justly enjoy, "that they spent nearly half their time in differing from their learned brethren."—*British Medical Journal.*

AMERICAN MEDICAL ASSOCIATION.—We were not present at the forty-first annual meeting of the American Medical Association held May 20, 21, 22 and 23, at Nashville, Tenn., but the accounts we have heard in regard to it make us regret very much that circumstances prevented our attendance. Says the *Buffalo Medical and Surgical Journal*: "Finally, though of not the last importance, we must speak of the social side of the Nashville Annual, for no account of this great occasion would be complete that omitted to do justice to this part of the meeting. While in this beautiful city of the Mid-South, so noted for its educational institutions, handsome women, and attractive scenery, it was expected that much would be done for the entertainment of the guests. No conception could be formed in

advance that would approach the realities of what the hospitable people were capable of, or of the extent of their generosity in the direction named. While it is impossible to particularize with the space at our command, we may say that from the moment the visitors arrived on Monday, until the last one departed on Saturday, there was one continual round of social entertainment that was of the most delightful sort. Receptions, excursions, teas and visits, rides, drives and walks were all happily appointed, and reflect the greatest credit upon the citizens of Nashville, who seemed to vie with each other in devoting their time and money to the entertainment of the American Medical Association."

The *Nashville Journal of Medicine and Surgery* says that while the number in attendance fell below what had been expected, yet it was larger than for several previous meetings, reaching over a thousand on the registration list. We are not informed in regard to the numbers present at the meetings since the Association held its session in Cincinnati a few years ago, but when it met here, it was estimated that the number of members and visitors in attendance amounted to over fifteen hundred. But there were enough present at Nashville, no doubt, for work and enjoyment. All sections of the United States, the *Journal* says, were represented; every State in the Union having delegates present. It is stated that the general sessions were well attended, and as a rule the proceedings were harmonious and satisfactory, though now and then a ripple of discord stirred the surface, as when the report of the Trustees of the Association *Journal* was read and discussed. It may not be true at all, or it may be that it had only a foundation in truth, but we were informed that a delegate from Cincinnati was badly flayed for proposing that the *Journal* of the Association be discontinued, and the publication of the transactions and the papers read before the various sections be resumed in an annual volume, as was done before the *Journal* had existence. We think that there must be some mistake in the report, for we can not help believing that if one of our Cincinnati brethren had made a proposition of the kind, there would have been present too many in sympathy with it, and who would have come to his aid in sustaining it, to have prevented him being so overwhelmed by the number of opposers, that he was "chewed up and spit out." The expression is not an elegant one, being

such as is used only by the ignorant and rude, but it is the one we heard employed to describe how completely the party was defeated who made the attempt to have the Association return to the old plan to preserve its transactions and the meritorious papers read before its sections. By the way, we do not hesitate to declare it as our opinion that we consider it the better plan to print an annual volume than publishing a weekly journal; for, although the *Journal* of the Association is, in every respect, a first-class medical journal, and, as such, compares favorably with the best medical journals, yet it is no more a journal of the American Medical Association than are other large weekly medical journals that are in the habit of printing in full the transactions of the Association and the papers of the sections. As a medical journal it does not "fill a want." In fact, in order to compete with other journals, and make its patrons satisfied with it, so as to insure its being able to meet its expenses, after membership fees have been paid out for the purpose, it has to publish a vast amount of matter with which the Association has no concern or interest in. In every issue there are published contributions which the authors would not think of reading before any medical society as essays, also the usual professional news is spread out in it, etc. Of course, publishing such matter makes the *Journal* more acceptable as a medical journal, but it is foreign to its real purposes. But we must hasten on.

The address of the retiring President, the *Nashville Journal* says, "was what might have been expected of such a grand old man, eloquent, impressive, and practical." The work of the sections, it is stated, was satisfactory, an immense amount being accomplished, as might be inferred from the fact that over two hundred papers in all were read and discussed. The Section of Medical Jurisprudence, we hear, carried off the palm in the importance of questions discussed, as those of the legal aspects of abdominal surgery and the responsibilities of criminal inebriates were fully considered.

Dr. N. S. Davis, of Chicago, delivered the annual address on Medicine. From a brief synopsis made of it we quote the following: "He claimed that a general fever, instead of a high temperature, is a complex, morbid condition; involving all the functions of the body, the elevation of temperature being only incidental. The real value of any remedy in the treatment of acute general diseases can not be deter-

mined by its specific effect in temporarily controlling one or two common symptoms, but the mode of its action on the general system. Physiological investigation has proved that all nerve sensibilities and molecular changes are dependent on the presence of arterial blood containing oxygen. All the acute general diseases accompanied by abnormal temperature include disturbance of these processes. Abundant observations and experiments on animals show that many of the favorite anti-pyretics produce their effects by more or less direct interference with the function of the blood. They impair the assimilative processes, as shown by the diminished conversion of food into sugar in the liver and muscles and the diminution of nitrogenous eliminations. He entered into an extended discussion of typhoid fever. He thought it safe to relieve the excess of heat by the natural process of radiation, exhalation and general evacuations. This can be done by frequent sponge bathing, aided by wrapping the patient in a cold, wet sheet, which can be done with a positively refreshing influence."

Section of Medical Jurisprudence.—The address of the Chairman of this Section, Dr. T. B. Evans, of Chicago, was upon the subject, "Responsibility in Dipsomania." This paper, says the *Nashville Journal*, was a learned and exhaustive exposition of the subject. The speaker took the position that the victim of dipsomania was a maniac, and, therefore, irresponsible. He criticised the recently delivered opinion of Chief Justice Coke, that the drunkard was doubly guilty, and claims that only experts could be expected to pass opinion as to the diseased conditions of the brain resulting from long-continued inebriety.

"The Need of a New Criminal Jurisprudence Affecting Inebriety" was the title of a paper prepared by Norman Kell, of England, and read by Dr. Orpheus Everts, of Cincinnati. The author of this paper took about the same views as those expressed in the Chairman's address. He cited two death sentences recently passed—one in France, the other in England—for crimes committed by drunken persons, and declared it a scandal to our justice. He thought that the ancestry of persons who had committed crimes should be investigated for several generations back before sentence be passed. He declared strongly reconstruction of the law affecting inebriety.

The subject of the third paper was "Some New Medico-Legal Questions Relating to Inebriety," by Dr. T. D.

Crothers. He agreed in the main with the sentiments of the foregoing papers. He did not think a man could plan a crime and then get drunk to commit it. The mental condition and circumstances and many other questions are to be considered in the determination of man's responsibility or irresponsibility.

The discussion that followed the reading of these papers was participated in by Dr. D. R. Brower, of Chicago; Dr. Everts, of Cincinnati; Dr. Knapp, of Lincoln, Neb.; Dr. Inglis, of Detroit, and Dr. Cook, of Ohio, all of the speakers sustaining for the most part the views expressed in the three papers.

A paper on "The Medico-Legal Relations of Cerebral Paralysis" was read by Dr. Brower, of Chicago.

On motion of Dr. Brower, a committee was appointed to request the Association to change the name of the Section of Medical Jurisprudence to the Section of Neurology and Medical Jurisprudence. The Association granted the request on motion of Dr. J. H. Callender. *The Section of Surgery and Anatomy* was opened by an address on "Concussion of the Spinal Cord," by the Chairman, Dr. B. A. Watson, of Jersey City. His conclusions were that in nearly all cases of injury to the spinal cord there would be grave lesions of other parts of the body; a serious injury of the cord is possible even in the absence of demonstrable lesion of the inclosing bones and ligaments; and further, that unless there were demonstrable lesions of the cord itself, no sequelæ of grave import should be apprehended. He further stated that no amount of force applied to the anterior part of the body could possibly affect the cord, and that pathological lesions were never produced in this portion of the nervous system by the application of moderate force. The paper was exhaustively discussed by Drs. W. P. King, Kansas City; J. H. Murphy, of St. Paul, and S. F. Carpenter, of St. Joseph, Mo.

The next paper presented was upon "Rhinoplasty," by Dr. Ricketts, of Cincinnati. The author advised that flaps be taken preferably from the cheeks; if not possible from that portion, from the arms, and finally, if it be not possible to obtain flaps from either of these regions, that they should be taken from the forehead. Silk is the best material for the sutures. Wire should be used in uniting bone. Where resection of bone is required, the deficiency should be made up by sawing from the superior maxillæ rather than from

the forehead or hand. In all doubtful cases an exploratory incision should be made, and the operator should bear in mind the effect developing teeth sometimes produce on the bone.

"A New Intestinal Suture" was the title of a paper read by Dr. Clarence L. Lewis, of New York. This suture combined the best qualities of the continuous suture and the Lembert interrupted suture. It is really an improved continuous suture. The advantages claimed were increased strength of suturing and rapidity of execution.

In the discussion, Dr. Shemwell, of Philadelphia, contended for the superiority of the interrupted suture, in that it was safe and more quickly applied. He urged that increased strength was not necessary, since the bowels were always paralyzed at the seat of operation. Dr. McCoomis, of Maryland, spoke in favor of the continuous suture, narrating a case in which he had used it successfully.

Dr. Thos. Manly, of New York, presented a paper on "Operation for Radical Cure of Hernia in Early Infancy," in which the opinion was expressed that recommending a truss was a confession of inability to cope with this disease, and that in early infancy a truss could rarely be endured, or if endured, did not effect a cure. In the discussion, Dr. J. B. Deaver, of Philadelphia, alluded to the fact that in children the truss was not merely palliative, but often curative—that after all operations for radical cure, a return of the hernia was probable, and that indications for the operation were strangulation, irreducibility, or inability to wear a truss. Of all operations he considered McBurney's the best.

Though the address of the President, Dr. E. M. Moore, of Rochester, was among the first of the proceedings, yet it has suited our convenience to refer to it last in our epitome. The synopsis we here present we have taken from the *Nashville Journal of Medicine*, to which we are indebted largely for the reports we have already given.

The President took for the subject of his address, "Hygiene in its Relation to the Government." What, said he, has been the progress of opinion on this subject? Could we feel that it had received the attention that it deserved? We are here to-day because we are therapeutists, and not because we are hygienists. We should not be discouraged; great movements are slow. The speaker then reviewed the history of hygienic legislation from the time of the passage of the first act, Feb. 26, 1876, to May 26, 1886, when by a

joint resolution of Congress, the Secretary of the Treasury was charged with the regulation of the quarantine. In 1879 another advance was made, whereby the Surgeon General of the Marine Hospital Service was empowered to make rules for the Consuls in foreign ports with reference to the condition of vessels and cargoes bound for ports in the United States. During the same year still further advances were made by the appropriation of money to defray the expenses incurred in the investigation of the origin and causes of epidemic diseases, and by the establishing of State Boards of Health. A national outcome of State Boards was the National Board, the development and growth of which the speaker then traced to the time when it was established, March 3, 1879. The National Board of Health, he said, had a splendid record. Brought into being by the presence of an overwhelming calamity, it achieved a success that was the most remarkable in the history of hygiene, in converting Memphis from a pest-house into a healthy and flourishing city.

The Marine Hospital Service, founded in 1798, was, he said, the most active and prominent among the functionaries of health under the direct rule of the National Government. One could not become familiar with its work without having a strong feeling of admiration for the care with which the Service was administered. The management of the late epidemic of yellow fever was proof of the efficiency and value of this Service. There was still another field of sanitary action, that of the consideration of animal diseases. In 1884 a Bureau of Animal Industry was organized for the study of the contagious diseases of cattle, and placed under the control of the Commissioner of Agriculture, who had been successful in arresting the spread of pleuro-pneumonia. The best results had been obtained by co-operation with State authorities. The speaker then reviewed the work of this branch of the Government.

The Government had shown willingness to advance in the great work of hygiene, but did not take the initiative. To illustrate this he cited the investigations of Sternberg and Frere, and the doings of the International Conference and of the convention of Montgomery.

Taking up the question of regulation, he asked, Could a National Board of Health meet the requirements indicated in the exclusion of epidemics from our borders; their passage from State to State, the hygiene of cars; the drainage

of swamps in malarial districts; the adulteration of food, and the various other matters which would come within its province? The work would be too great for such a body. The Secretary of the Treasury was now obliged to make regulations through the Marine Hospital Service which had no natural relation to the object for which the Service was created. The Service had its laboratories, and the Army, Navy and Bureau of Animal Industry theirs. These disconnected departments should be consolidated, and the solution of the question, he thought, must be found by the appointment by the Government of a single man who would give his undivided attention to this great subject. That man need not be a medical man, but he should be to his functionaries what the Secretary of War was to his. The control of all the bureaus of investigation should be under one head. The time had come when the health minister should be appointed. When the Government had consolidated these bureaus of investigation and hygiene, it would be found that of all the men chosen by our Chief Magistrate to aid him in carrying on the functions of the Government, the Secretary of Sanitation would have the most arduous labors to perform.

The election of Dr. W. T. Briggs, of Nashville, as the President of the Association is regarded as a merited compliment to the profession of the South. San Francisco was urged as the place of the meeting of next year, but it was decided to meet at Washington, being the most accessible to the greatest number of members.

CALOMEL AS A DIURETIC.—Dr. George Fackler, of Cincinnati, read a paper before the *American Medical Association* at its late meeting, entitled as above. The following are the conclusions of the paper:

1. Calomel and all other mercurials are diuretic in certain doses and under certain conditions. 2. If given in proper doses, the effect is seen in from two to ten days. 3. The action is most marked in dropsy from heart disease, is not apparent in that of hepatic origin, and is uncertain in pathological changes of the kidney. 4. Small doses are indicated. 5. The diuretic action is due to the irritant effect of the drug on the renal epithelium.

In the discussion Drs. Ulrich, Caldwell, of Florida, DeSaussure, of Charleston, corroborated the views expressed by the author in his paper.

THE MERRITT TYPE-WRITER.—Our subscribers should read the advertisement of the Merritt type-writer. It will undoubtedly be found to be all that is said in regard to it. This machine is especially adapted for the use of physicians. There is scarcely a medical man who does not at times need a type-writer. But he can not afford to pay the wages of a person to write for him; and the ordinary type-writer is too complicated for him to stop in his business long enough to learn to use it. The Merritt machine, however, is of simple construction, and its management is learned without any trouble, and in a very brief period of time.

Send for circulars containing testimonials.

CHOLERA.—There have been reports of cases of cholera having appeared in some parts of Europe, as in the southern part of France. But it is probable that such cases were only severe sporadic cases of cholera morbus. There is no doubt, however, but that genuine cases of Asiatic cholera, since the advent of hot weather, have appeared in the Turkish Empire in Asia, near Bagdad. It is stated that of thirteen persons attacked, six have died. It is hardly probable that it will reach this country.

ADDRESS ON MEDICINE.—At the meeting of the *American Medical Association* held in May last, at Nashville, Dr. N. S. Davis, of Chicago, editor of the *Journal* of the Association, delivered the annual address on Medicine.

He referred to the recent changes and progress in medicine, and proceeded to ask the attention of the audience to a limited number of topics that are at present exerting an important influence on the progress of Medical Science. He spoke of the microscopic search for bacteria, which has recently become so popular. He said that a large proportion of the bed-side practice had become little more than a clerical process, recording the temperature as indicated by the clinical thermometer, and adjusting the stimulants and food in accordance therewith, little attention being given to the condition of important secretory and excretory organs. Dr. Davis is now a very old man, and during the greater part of the time he has practiced medicine, the clinical thermometer was unknown. In fact, he was on the verge of old age before either the clinical thermometer or the microscope was thought of as a possibility, or as an aid in diagnosis, prognosis, and affording indications of treatment,

etc. At such a late period a person naturally does not take kindly to discoveries which require the labor of hard study in order to secure the advantages of their use.

He claimed that a general fever, instead of a high temperature, is a complex morbid condition, involving all the functions of the body, the elevation of temperature being only incidental. The real value of any remedy in the treatment of acute general diseases cannot be determined by its specific effect in temporarily controlling one or two common symptoms, but the mode of its action on the general system. Physiological investigation has proved that all nerve sensibilities and molecular changes are dependent on the pressure of arterial blood containing oxygen. All acute general diseases accompanied by abnormal temperature include disturbances of these processes. Abundant observations and experiments on animals show that many of the favorite anti-pyretics produce their effects by more or less interference with the functions of the blood. They impair the assimilative processes, as shown by the diminished conversion of food into sugar in the liver and muscles, and the diminution of nitrogenous eliminations. He entered into an extended discussion of typhoid fever. He thought it safe to relieve the excess of heat by the natural process of radiation, exhalation, and general evacuations. This can be done by frequent sponge bathing, aided by wrapping the patient in a cold, wet sheet, which can be done with a positively refreshing influence. He referred to the effect of alcohol used for a remedy in the treatment of disease. He treated the effects on the functions of the more important organs and the constituents of the blood and tissues.

When taken into the stomach in a diluted form, alcohol undergoes no digestion, but is carried directly into the blood, and some part of it is speedily eliminated unchanged through the lungs, kidneys and skin. Experiments show conclusively that about ten per cent. of the alcohol taken loses its identity immediately on mingling with the blood. A careful review shows no evidence of marked increase either in heat production or carbon dioxide by the presence of alcohol in the blood. On the other hand, the average heat dissipation has been proved to diminish. While present and circulating with the blood, it diminishes nerve sensibilities of course, lessens the average temperature, retards molecular changes in the tissues, and lessens the aggregate of effete elimination.

The well-known fact that alcohol possesses a strong affinity for the water and the albumen of the living tissues was discussed at length, the experiments of Drs. Richardson, Harley, Payne, Kales, Wood, Martin, Loomis, Davis, Edgerley, Townsend and many others being carefully reported. Alcohol causes less oxygen to be carried from the pulmonary to the systemic capillaries. It causes a diminished product of carbon dioxide, urea, phosphates, heats, etc. It is a true anæsthetic upon the nerve centers. Instead of generating any kind, or form, or force of energy, it actually diminishes every known form of force belonging to the living body and promotes molecular and tissue degeneration. If administered in acute general diseases, it quiets the patient's restlessness and lessens his consciousness of suffering, but favors the retention in the system of both the specific causes of disease and the natural excretory materials that should have been eliminated. It adds to the number of fatal results. The very generally accepted doctrine that alcohol is a cardiac tonic does not rest on the true basis of clinical experience. The nearest approach to such a basis is furnished in the reports of hospital and private practice for a given period where the diseases in question were treated without alcohol and anti-pyretics, and where both were freely used. In 1864 the Commissioners of Public Charity in New York City, on account of the great mortality of fever patients in the hospital, removed them to Blackwell's Island, where they were placed in tents. Their treatment was exclusively hygienic, consisting of ample ventilation, good air, cleanliness and simple nourishment. The result was a death rate of only 6 per cent.

Dr. Davis said that the foregoing conclusions were the result of a life-work, and his faith in the efficacy of the remedial agents had in no way else been diminished. He would feel repaid if they should lead any member of the profession to a clearer understanding of the real *modus operandi* of the remedial agents used in the treatment of acute general diseases.

DEATH OF DR. J. S. MCNEELEY.—Dr. J. S. McNeeley, of Hamilton, O., we have learned, has died since the last issue of the *Medical News*.

Dr. McNeeley was born in Highland County, Ohio, in 1829. He began his medical education in Cleveland, afterward pursuing it in Cincinnati, and completing his courses

of lectures in Philadelphia and New York. We have not been informed at what college he graduated. After receiving his degree, he began the practice of medicine in Mississippi, and continued in business until the late war began. After a trying test of his patriotism, he returned to Cincinnati and entered the service of the Federal Government, acting as a surgeon on the Western gunboats. He participated in a number of the fiercest naval engagements of the war—Ft. Henry, Ft. Donaldson, Ft. Pillow, Ft. Jackson, Island No. 10, and others. Compelled by sickness to resign, he came North and settled in Hamilton, where he practiced his profession until his last illness.

Dr. McNeeley's fellow-citizens and neighbors speak of him in the highest terms and with the utmost affection. In his religious belief he held to the Presbyterian tenets. He was a ruling elder in his denomination for twenty-two years.

He was appointed Pension Examiner, by President Lincoln, and so faithfully and conscientiously did he discharge the duties of the office, that he held the position to the time of his decease, through the different changes of administration.

By the death of Dr. McNeeley we lose a highly esteemed subscriber. The *Medical News* having been established nearly a quarter of a century, we have begun to receive numerous announcements of the decease of those who began their subscription with the starting of the journal and continued them right along.

DECEASE OF DR. WM. H. BYFORD, OF CHICAGO.—This highly distinguished physician, Professor of Gynecology in Rush Medical College, has recently died. He was the author of several works—"Byford on the Uterus," "Diseases of Women," etc. His works were regarded as authorities upon the subjects upon which they treated.

It is said of him that with fewer advantages than most boys had, for he was left fatherless at the early age of nine, and deprived of even the common opportunities for attending school, he yet managed, even while apprenticed to a trade, by means of books which he borrowed or bought, to get a fair knowledge of English, French, Latin and Greek, and then to take up the study of medicine, and to make such progress in that, that he was able to pass the required examination for admittance to practice in the State of Indiana at the early age of twenty-one.

He graduated at the Medical College of Ohio, and soon after became Professor of Anatomy in the Evansville Medical School. Two years later he became Professor of Theory and Practice in the same institution. In 1857 he was elected to the chair of "Obstetrics and Diseases of Women" in Rush Medical College, and removed to Chicago. This position was a new era in his life, for he felt that he had obtained his appropriate sphere. In 1859 he accepted the chair of "Obstetrics and Diseases of Women" in the new school since known as the Chicago Medical College, and for twenty years he labored faithfully and successfully for its permanent success. In 1879 he was chosen Professor of Gynecology in Rush Medical College.

In 1870 Prof. Byford gave his influence and personal services for the establishment and maintenance of the Woman's Hospital Medical College of Chicago, for the exclusive education of women in medicine.

He became a member of the American Medical Association at the annual meeting in 1854, and was appointed a special committee to report on Scrofula. At the next annual meeting, 1855, he made an elaborate and valuable report, which occupies about forty pages of the eighth volume of the Transactions.

It is stated that his practice in Chicago was both large and lucrative.

H. T. BECHTOLD, M.D., O'Fallon, Ills., says: "After experimenting for several months with CAMPHO-PHENIQUE, I am convinced that as an antiseptic and local anæsthetic it stands first on the list of like preparations, and am using it very extensively now. I have used CAMPHO-PHENIQUE in a case of chronic ulcer of twenty-two years' standing, by dressing same with absorbent cotton saturated in CAMPHO-PHENIQUE, pure. After repeated dressings, the ulcerated tissues are now entirely healed. In all cases of chronic catarrh I have used it with marked success. It would be impossible for me to do without CAMPHO-PHENIQUE."

A letter enclosed with the above from Dr. Bechtold says: "I am sure that what I write does not have much weight, but I am also sure this is the first time I ever gave a testimonial as an M.D. If you can use it, all right; if you can not, why I am sure CAMPHO-PHENIQUE is just as indispensable to me."

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 271.
Old Series.

JULY, 1890.

{ VOL. XIX. No. 7.
New Series.

Original Contributions.

Apparent Cancerous Transformation of Syphiloma of the Tongue.

EXCISION OF THE TONGUE BY THE GALVANO-CAUTERY.

BY G. FRANK LYDSTON, M. D., CHICAGO, ILL.

(Read before the Mississippi Valley Medical Association, September 10, 1889.)

THE possibility of the existence of a combination of syphilis and carcinoma has recently attracted some attention from the profession, and it has been claimed in certain quarters that a transformation of a syphilitic into a cancerous process is possible. The first cases of combined cancer and syphilis were reported by Jonathan Hutchinson, and following him Langenbeck directed attention to this unusual class of cases. Lang, of Vienna, recently exhibited a case of the kind before the "*Medizinisches Doctoren Collegium*." The patient was a woman who had suffered from syphilis for a protracted period. Scars of former syphilitic processes were present upon the trunk and face, the palate being perforated, and the upper lip having suffered considerable loss of substance. At the time she came under Lang's observation, most of the ulcers were covered with a white scab, the histological examination of which did not reveal any sign of importance from a diagnostic standpoint. About a month later, however, a small, white, indolent ulceration appeared upon the hard palate. A small portion of the involved tissue was excised, and upon microscopical examination by Professor Weichselbaum, was found to be epithelioma. In the course of the discussion Professor Lang stated that he had observed three other cases which were very similar, the development of the carcinoma upon

a syphilitic soil being demonstrated in each instance by microscopical examination. The first case, which came under his observation in 1883, had suffered from a characteristic course of syphilis, which included numerous relapses of iritis and gummatoous ulcerations upon the face. Under anti-syphilitic measures all of the ulcerations cicatrized, with the exception of one, which became transformed into a croupoid of the skin.

The second case was that of a man, aged forty-six, who had suffered from various syphilitic ulcerations on different parts of the face and body. After anti-syphilitic treatment one ulcer, located beneath the tongue, proved resistant to treatment and became transformed into cancer. In the third case a syphilitic infiltration, located in the lower lip, underwent a relapse at the end of a year and assumed a carcinomatous character.*

It is unfortunate that the profession have not more carefully noted the cases in which carcinoma has developed upon a syphilitic base. There are many cases in which careful study might demonstrate the causal relation of syphilis to malignant disease.

The case which I have had the opportunity of observing, and here recording, was one the progress of which I had been enabled to study for a protracted period, and there can be no possibility of doubt as to the primary condition upon which the malignant disease that eventually destroyed the patient's life was engrafted. In recognizing the transformation of syphilitic processes into cancer, I do not wish to be understood as claiming that the histological elements of syphilis may be transformed into those characteristics of cancer, but that the elements of syphilis having been removed, they leave the tissue so damaged that continued irritation will result in cancerous degeneration. On the other hand a syphilitic process may recur so frequently, and be so obstinate to treatment, that the irritation thereby produced is capable of causing cancer.

It is as yet too soon for us to discuss the question of the existence of special bacilli in syphilis and cancer for the purpose of disproving the possibility of the transformation of the one into the other. It is conceivable that both can-

*Since the above was written Spanton has reported a case of transformation of a syphilitic ulcer of the cervix uteri into epithelioma (*Brit. Med. Journal*, March 15, 1890.)

cerous and syphilitic deposits may act in the same manner as other irritating processes in the tissues. It is to be presumed that if a cancer were present in the mouth of a syphilitic subject, syphilitic processes would be more apt to develop in the vicinity of the malignant disease than elsewhere. A somewhat similar relation exists between the presence of the syphilitic process and the development of carcinoma. Whether actual transformation can occur or not, it is certain that cancer may develop in tissues which are indubitably affected by a syphilitic process, and that said cancer may go on to destruction of tissue, and finally, of the life of the patient. This may occur without any preliminary change in the physical appearance of the tissues affected by syphilis prior to the development of the cancer. I feel warranted in speaking thus positively from my experience with the case which I am about to relate.

In regard to the bacillus of cancer, it is as yet an unknown quantity. As far as the bacillus of syphilis is concerned, no one has so far been able to positively demonstrate that the supposed bacillus of syphilis is really the specific bacillus. In the words of Dr. N. Senn, "that syphilis is a specific disease can not be doubted, that it is due to a microbe can not be doubted, but to establish this positively, experiments must do what Koch did before he announced the specific origin of tuberculosis."

To put the matter of the transformation of syphilis into cancer concisely, I would say that I do not believe that syphilitic cells can possibly be transformed into cancer cells; but I infer that the irritation of the tissues produced by the former may, in the presence of favorable constitutional and local conditions, develop a new process of tissue-building or neoplastic formation which will result in the formation of cancer cells. I have taken the liberty of relating my own case in detail.

Case.—The patient, a man, aged twenty-nine, contracted syphilis at the age of eighteen. He stated that at that time he contracted a hard chancre, which inflamed and caused paraphimosis, which lasted about a month, and left the mucous membrane of the penis in an irritable condition that resulted in the frequent appearance of fissures and ulcerations, some of which were treated by me from time to time after he came under my care. Secondary symptoms appeared about four months after the primary sore, and, according to the description, a pronounced papulo-pustular

eruption appeared, and resulted in considerable scarring of the skin. Mucous patches presented themselves in successive groups, and, as the patient expressed it, "were very annoying, especially those upon the tongue." After the secondary period became manifest, the physician in charge of the patient put him upon mercury, a thorough course of which was given for about three months, when he went to the Hot Springs. He remained at the Springs for three months, was rubbed with an enormous amount of mercury, and badly salivated twice. He went home, and at the end of two months eruptions again appeared upon the body, with also larger mucous patches than before, his tongue at this time giving him some considerable trouble by reason of the general soreness of the organ. At this time an old eczema of the hands, which had troubled the patient off and on all his life, broke out, and in combination with the syphilis gave him a great deal of trouble. He again went to the Springs and remained there for eleven weeks, during which time he took mercury internally quite freely. He again went home, and was apparently well for three months, when mucous patches and eruptions broke out, sores appearing at this time upon the penis. About five years after the beginning of the syphilis the patient fell under the care of a physician, who again rubbed him freely with mercury, the treatment being continued for about six months. He improved for a time and then quit treatment, as such patients so frequently do; but again got worse and went back to the same physician, and for at least eighteen months took mercury in considerable quantity. He was then advised to go to Mount Clemens, Mich.; he remained there about fifteen months, and while there became entirely well of his eczema, the syphilis, however, never leaving him entirely.

In 1884 the patient consulted me for the first time. He had then unequivocal cerebral syphilis, and tuberculo-squamous syphilides in considerable number were scattered about the forehead, forearms, and thighs, with a few scattered squamae upon the trunk. Scars of former pustular syphilides were visible upon the forehead, forearms, and legs; the tibæ and sternum were excessively tender, and considerable pain was experienced at night. Cephalgia was a constant symptom, and gave the patient intense suffering. An apparently gummy ulceration, with several fissures, existed upon the penis, just back of the corona.

The tongue was rough, and coated with a thick, dirty,

yellowish-gray fur, with marked dryness in the center and posterior part of the organ. Several tubercular nodules were also observable, one in the center of the tongue, and the others near its base, those upon the right side being especially marked. On inquiry I found that the tobacco and alcohol habits had been persisted in for a greater portion of the time that he had been under treatment, and much to my surprise, he informed me that his physician had not restricted him in the matter of either indulgence. The treatment at this time was very vigorous; cod-liver oil and iron were ordered, on account of the patient's marked debility. The mixed treatment and the iodide of potassium in saturated solution were given, the iodide being run rapidly up to a dose of three hundred grains per diem, and maintained at that point for three weeks, the disease being completely resistant to treatment until the end of that time. Local applications of the acid nitrate of mercury were made to the tongue from time to time, and with apparent benefit. As soon as the symptoms began to yield to treatment, the dose of the iodide of potassium was diminished to about sixty grains per day, the tonics being meanwhile continued. At the end of three months the patient was free from trouble, with the exception that his tongue was more thickly coated than ever (psoriatic), and the nodules upon its surface were still perceptible. No amount of care and treatment ever caused this condition of the tongue to disappear entirely, and, as the history will show, it subsequently became the source of terrible trouble. The case remained comparatively well until about five months ago, the tongue creating some uneasiness from time to time on account of commencing ulceration of nodules upon its surface, but yielding rapidly to treatment. On each occasion, however, the nodules and furring of the tongue became more prominent, and remained so in spite of treatment, the furring becoming a sort of membranaceous deposit, like wet chamois leather, which re-formed as fast as it was removed.

At this time, while at the Hot Springs under the care of Dr. Vaughn, the tongue began to swell, and assumed a threatening appearance; the nodules began to ulcerate, and at one time a severe hemorrhage occurred.

I have not received the complete history from Dr. Vaughn, but suffice it to say that after all means of treatment had been tried for two months without avail, the case was pro-

nounced probably cancerous by the attending physician and several others who saw it in consultation. At this time Dr. Vaughn referred him to me with a view to possible excision. Upon examination I found the tongue filling the mouth and pressing upon the teeth in such a manner that it had become eroded and ulcerated by them. Salivation was profuse; a deep ulcer existed at the center and back part of the organ; the enlargement seemed to be rather more marked upon the right side. The submaxillary glands were slightly enlarged; there were no lesions present upon any part of the body.

Microscopical examination at this time failed to demonstrate the presence of cancer. No further examination of the tissues was made until after the tongue had been excised.

As the patient experienced great difficulty in masticating and swallowing, he was subsisting entirely upon fluid food, and not being very robust primarily, had become greatly emaciated. The treatment instituted was chiefly a tonic one, in conjunction with an alterative mixture containing iodide of sodium and the chloride of gold; milk punches were allowed, and the patient instructed to take as much sweet cream and milk as he could without creating digestive disturbance. Local applications were made of a compound of carbolic acid, iodine, and menthol, in mild strength. Improvement was at first very rapid, and at the end of a week the tongue was nearly reduced to its normal size. In a few days, however, it again enlarged upon the right side, this enlargement being peculiar in that it was limited by the raphe, the tongue being at least double the thickness upon the right side than it was upon the left. The appearance was precisely the same as that presented by several cases of acute glossitis that I have seen, and resembled it strongly in the rapidity of its appearance; the increased thickening having come on within twenty-four hours. This condition of the right side of the tongue soon subsided, but was succeeded by enlargement of the tubercular nodules previously mentioned, and by the appearance of several new nodules. These appeared not upon the margin of the tongue but upon its upper surface.

In a few days the left side of the tongue underwent a diffuse enlargement, precisely similar to that which had occurred upon the right, and in exactly the same way subsided, and was succeeded by the development of tubercular nodules. The whole tongue now gradually increased in

volume, and became so large that it hung over the edges of the teeth and protruded through spaces left by the extracted teeth. There was little or no pain, and such as there was, was referred by the patient to the "holes" as he expressed it, worn in the tongue by the teeth. As soon as the case began to get worse the chloride of gold, or alterative mixture, was stopped, and the iodide of potassium was again run up to three hundred grains per diem; there seemed to be some improvement, and the drug was stopped for two weeks. At the end of this time it was again begun, as the case had again assumed a threatening aspect, and was now increased to the enormous dose of six hundred grains per diem. I soon became convinced that the iodide had lost its effect, and was producing no result, unless perhaps increasing the swelling of the tongue. Mild inunctions of mercury were tried next, at the suggestion of a professional friend, but they merely served to make the case worse, as had been my experience with his previous troubles.

Punctate cauterization with the galvano-cautery was tried, with some reduction in the size of the tongue. Soon after this, however, sloughing began and destroyed the greater portion of the right side of the organ, the remainder of the tongue being undermined and eroded and the floor of the mouth extensively invaded by the central ulcer, of which mention has already been made. During this time I exhibited the patient to a number of my professional friends, among whom were Drs. Hawley, Hayes, Zeissler and Baxter, all of whom pronounced the trouble syphilitic, agreeing with my own diagnosis.

The case went on from bad to worse, many different plans of treatment being tried without avail. The sloughing continued until the tongue was in such a condition that even if healing had been possible the organ would have been practically useless. The base of the tongue was a foul mass of hyperplastic, ulcerating tissue, the odor and secretion from which were not only offensive to the patient, but were prominent factors in producing the constitutional disturbance. There seemed to be no hope of benefit from either internal or local medication, and in addition, the malignancy of the process appeared to be now established. As the patient was anxious to have something done to remove the foul and stinking mass from his mouth, I proposed excision with the galvano-cautery, an operation to which he readily consented.

Operation.—The operation was performed on July 30, 1888, with the assistance of Drs. P. S. Hayes and W. S. Walker, and Mr. Knight, medical student. The Fleming battery was used, with a platinum wire of moderate size. A preliminary tracheotomy was not performed because of the objections of the patient. Great difficulty was experienced in the operation, on account of the necessity of separating the tongue longitudinally, there being a large mass of ulcerating hyperplastic tissue at the base of the organ which required removal. It was found to be impossible to transfix the base of the tongue transversely with a needle, and at the same time it was necessary to have something as a purchase for the wire. A stout needle with a long double thread, to prevent it being detached and swallowed, was passed obliquely from above downward and forward as far back upon the base of the tongue as was practicable, a long needle-holder being used for this purpose. The wire was slipped over the needle and made to include as much of the base of the tongue as possible. The anterior portion of the tongue was readily included in the loop, as it was separated from the floor of the mouth in such a way that the electrode needle was readily pushed beneath it. A small amount of chloroform was first given, as I had found by previous experience that the patient was extremely resistant to ether. As soon as he was under full anæsthesia, however, ether was substituted for the chloroform and acted satisfactorily. The current was turned on and the operation begun, when to my embarrassment the patient became so asphyxiated that respiration ceased and the pulse at the wrist was hardly perceptible. I immediately detached the wire from the tongue and inverted the patient, my assistants at the same time performing artificial respiration. In about five minutes the patient breathed as naturally as ever, and I was enabled to proceed. The current was again turned on and the tongue about half burned through when the patient became again asphyxiated, apparently by the smoke produced by the burning of the tissues in combination with the accumulation of blood and mucous in the pharynx, there being quite free bleeding from a couple of teeth that were loosened in their sockets in the attempt to pry the jaws open while performing artificial respiration. The inverted position and artificial respiration were again resorted to, but it was fully fifteen minutes before it was considered safe to proceed. The tongue was

finally completely excised. About the time the operation was completed the patient again stopped breathing, and a repetition of the previous performance of resuscitation became necessary.

I would not advise an operation of this kind to be performed without a preliminary tracheotomy; I certainly should not want to perform it again myself unless the patient would consent to be tracheotomized. The operation altogether occupied about two hours. The patient, three hours after the operation, was able to go aboard a street-car and ride to the hospital. At the end of a week the eschar produced by the cauterization became detached and left a surface of fairly healthy appearance; the fetor of the breath was improved and the sloughing of the base of the tongue ceased. The floor of the mouth healed nicely and remained in a tolerably healthy condition for several weeks; the submaxillary glands became smaller, and the general condition of the patient improved considerably. About a month after the operation, however, the submaxillary glands again enlarged, becoming larger than ever and quite tender. There was comparatively little pain save a moderate amount of cephalalgia and otalgia. The ulcerative process on the floor of the mouth recurred, but did not progress rapidly nor ulcerate extensively. A small ulceration formed upon the right pillar of the fauces. These symptoms practically settled the question of malignancy. Professor I. N. Danforth, having examined the specimens excised, informed me at this time that the case was of a sarcomatous nature, but I inferred from his report that it did not present typical characters. About two months after the operation an abscess formed in the submaxillary glands; this, when opened, gave exit to a thin, sanguous fluid. Pain at this time was very severe. At the end of about three months an occasional slight hemorrhage from the mouth occurred. The patient finally died, about four months after the operation, from a sudden hemorrhage occurring during the night.

This unfortunate case is, in many respects, unlike any other that I can find on record. The literature of the subject is very meager. During the course of the disease there were present distinctive features of several forms of glossal affection. During the four years that the patient was under my observation, the tongue presented gummy nodules and ulceration, lingual psoriasis, diffuse syphilitoma-

tous deposit, and latterly attacks of subacute glossitis. At various times before coming under my observation—and once since, as shown by the history—mercurial stomatitis occurred, and formed an important feature of the case, particularly I think, as regards the etiology of the process which finally necessitated removal of the tongue. Prior to extensive destruction of the organ, these various conditions merged into a general hypertrophy, the tongue becoming extremely indurated. These various features must be taken into consideration in studying the case.

Macroglossa, or hypertrophy of the tongue, of a simple character is very rarely seen, and few cases are on record of congenital origin. According to the published researches of Fairlie Clark, hypertrophy of the tongue occurring later in life may arise "spontaneously" (?), or from wounds, mercurial salivation, or as a consequence of diffuse inflammation from scarlet and other forms of fever. I will also add to these causes constitutional syphilis.

Attrition against the teeth in these cases of macroglossa produces from time to time attacks of acute or subacute glossitis, each of which leaves the tongue more enlarged than before (Konig). This has been a prominent feature of the case at present under consideration. The best authorities have recommended for the cases of simple macroglossa the use of astringent solutions in combination with compression. It is obvious that the latter measure is not applicable to cases like my own, whether malignant or not, in which necrosis of tissue is such a prominent feature. Clark reports forty-three cases, nine of which were cured by compression and astringents. In some cases excision of portions of the tongue has been performed with a successful result. This measure was not to be thought of in the case under consideration.

The causes which operated in the production of the lamentable condition of my case were, in my estimation, several. In the first place, it will be conceded that the numerous attacks of glossitis and stomatitis necessarily left the tongue in a more or less damaged condition, and caused a chronic condition of irritability which favored a deposition of syphilitomatous material in the organ at any time when the constitutional disease should become active. That the prolonged and injudicious use of mercury, independent of salivation, is prone to induce inflammatory and ulcerative processes of the mouth and the structures contained in its

cavity I firmly believe. Authors are united in the view that the excessive use of mercury is a frequent cause of glossitis. It is probable that the excessive, although necessary, use of iodide of potassium still further enhanced the morbid condition of the tongue. It is reasonable to suppose that such might be the case when we take into consideration the fact that the salivary glands are heavily taxed in the elimination of iodide of potassium as well as of mercury.

The continued use of alcohol and tobacco, in combination with the irritation produced by diseased teeth, completed a chain of circumstances which, in combination with the syphilitic cachexia, favored the development of a morbid process in the tongue.

The condition known as ichthyosis or psoriasis of the tongue is due to the same causes as generalized glossitis, and is really part and parcel of that process in which the inflammation is localized upon the surface of the mucous membrane.

According to Dr. Hullin, ichthyosis of the tongue consists essentially in hypertrophy of the epithelial and papillary elements of the mucous membrane. The relation of ichthyosis or psoriasis of the tongue to syphilis and cancer is very important, and all authorities unite in acknowledging its relation to syphilis, although it may occur in non-syphilitics. In appearance it resembles, in some cases, a deposition of wet chamois leather upon the surface of the tongue, as described in my case, which rapidly re-forms after removal. In other instances it resembles a thin layer of film of coagulated albumen, and in these cases each successive deposit is more dense and adherent than the preceding. The condition is prone to develop epithelioma, as Weir has shown most conclusively by the history of sixty-eight cases, of which number, thirty-five eventually developed epithelioma.

Hutchinson has also advanced the opinion that cases of syphilitic disease of the tongue are especially prone to develop epithelioma later in life.

That a condition similar to that of my case may undergo a transition into epithelioma or malignant sarcoma seems plausible, and such a transition I believe to have occurred in this instance. The presence of epithelioma, or its subsequent development in such a case, would be no argument in my estimation, against the accuracy of the previous diag-

nosis of syphiloma, inasmuch as it is conceded by the best authorities that such processes are prone to undergo a malignant transition. The course of this case and its history are widely different from the ordinary clinical features of epithelioma of the tongue. Epithelioma of the tongue, beginning four years ago, would not have lasted as long as this condition. The average duration in cancer is less than two years. The age of the patient would warrant a doubt as to the existence of carcinoma, cases under forty years of age being very rare.

There was at no time in the history of the case a cancerous cachexia, and the constitutional condition fluctuated quite markedly, depending upon the amount of nourishment that the patient was able to take. Several weeks after the operation he was in better flesh than at any time for two months previous.

The attacks of glossitis which occurred from time to time necessarily modified the clinical aspects of the case, and obscured the distinctive points in differential diagnosis. There are some features, however, that deserve mentioning in contradistinction to those of ordinary cases of cancer. The enlargement of the tongue was general, and the sloughing began at several points, this being decidedly unlike cancer, which is usually localized at the beginning, invades successive areas of the tongue, and does not attack more than one point, from which it gradually progresses. The induration in cancer extends with the ulceration, while in this case it became general before the ulceration had advanced to any extent. The ulceration, instead of beginning underneath the tongue or at the border of the organ at some particular point, as is the case in cancer, first attacked the tubercular nodules previously described upon the upper surface of the tongue near its center and base. One peculiar feature of the process was a clean dissection of one-half of the organ, the process being temporarily limited at the raphe; a line of progression that is very noticeable in syphilitic conditions, and which has given rise in my own mind to the belief that some of the late lesions of syphilis are of a trophic character, and the result of a syphilitic impression upon the sympathetic nervous system—a point upon which I will expatiate more fully in a subsequent paper.

There was a marked improvement, from time to time, in this case. Indeed, there were times when it seemed as though the disease was under control, and recovery prob-

able. In this respect there was a marked contrast with the classical course of cancer, in which the disease grows progressively worse until its close. After the operation the parts assumed a healthy appearance, the tendency to bleeding was entirely checked temporarily, the disagreeable odor disappeared, and the patient assumed a better color than before.

In ordinary cancer the tongue becomes absolutely immovable, while in this case there was some mobility at all times, and considerable during the periods of temporary improvement. The tongue was left harder and more indurated after each exacerbation of glossitis. The absence of pain until late in the case was quite remarkable, and presented a marked contrast to the course of cancer, in which the pain is usually very severe. The persistent enlargement of the lymphatic glands at the angle of the jaw was the most suspicious symptom in the case, as indicative of possible or probable malignancy, yet I think too much stress has been laid upon this feature of glossal troubles as pathognomonic of cancer; for, although late syphilitic lesions do not produce enlargement of the glands *per se*, the septic process which results from necrosis of the tissues, and the decomposition of food which may adhere to the uneven surfaces of ulcerations upon the mucous membrane, may give rise to irritation of the neighboring glands. Thus it seems that it is by no means necessary that cancer should exist in order that lymphatic glandular reaction may be produced.

In view of the great danger of processes similar to those which so long existed in my case, resulting in the development of malignant disease, it would seem that we would be justified in adopting some radical measure. Had I to go through a similar case again, I should profit by my experience, and destroy the tubercular nodules, as well as the thickened mucous membrane upon the surface of the tongue with the actual cautery. There is, of course, no means of proving the success of this line of treatment, and I may never have an opportunity of putting it into practice, on account of the rarity of such cases; but I believe that had it been done in this instance, the malignant process might never have developed. No remedy short of actual destruction would seem likely to be beneficial to such conditions. The only remedy which ever seemed to effect the ichthyosis of the tongue in this case was a saturated solution of salicy-

lic acid, which seemed to check the progress of the disease and improve the condition of the tongue for some little time, when it finally lost its power.

The precise period at which a malignant was substituted for a syphilitic process would be hard to determine. I am by no means convinced that the diagnosis of syphilis, made several months before the operation of excision of the tongue, was incorrect. The course of the case was certainly unique. Whether the time of the transition into a malignant process could have been determined by frequent microscopical examinations is questionable. Such microscopical examinations of the case as were made were at the hands of competent microscopists; but I am free to say that the results were hardly satisfactory, nor do I think that they themselves considered them to be so.

The condition present in the case which I have related might have been mistaken for tuberculosis of the tongue. The history and course of the case, however, militated against such a diagnosis. Tuberculosis is rare as a secondary condition, and still rarer as a primary disease of the tongue. In twenty-six cases collected by Delavan, nine out of the twenty-six were primary; in this series the primary cases were of greater than the average frequency.

Such cases certainly serve to impress upon us the necessity of recognizing and radically treating precancerous states of the tongue. Mr. Butlin, in a recent essay before the Harveian Society of London, stated that in quite a number of cases which had been under his observation, carcinoma of the tongue had been preceded by a condition which was so definitely associated with the subsequent development of cancer as to deserve the designation "precancerous." This condition he observed in over seventy per cent. of cases of lingual carcinoma. Papillomatous or warty growths were apparently the most dangerous of the morbid states which actually and immediately preceded the development of cancer. Such warty growths he showed to be much more frequent than was generally believed. The question arose as to whether it would be proper, in cases of leucoma (leucoplakia buccalis?) and chronic glossitis of a superficial character, in which warts or warty growths develop on the surface of the tongue, to remove the entire diseased area, or, at least, the anterior portion of the organ, instead of, as is usually done, removing the warty growth with a certain area of the surrounding tissue. Two cases were related in

which wart like growths developed on tongues affected by leucoma, and were removed, and in which, later on, carcinoma developed, but not at the site from which the warts had been removed. The internal administration of liquor arsenicalis was advised in all cases of chronic disease of the tongue which were associated with various forms of chronic disease of the general integument of a non-specific character. Several cases were also related to demonstrate the advantage of early excision of cancerous affections of the tongue. In view of the fact that in chronic syphilitic or other affections of the tongue, protracted irritation is apt to develop cancer in the already degraded tissues, it is desirable to avoid applications of an irritant character. The nitrate of silver particularly ought to be used cautiously as a stimulant or astringent, but never as a caustic. When it seems desirable to destroy portions of diseased tissues by means of caustics, the galvano-cautery is the best method for accomplishing the object. In lieu of this, some active cauterant should be employed, such as chromic or nitric acid.

Tuberculosis and Consumption.

BY A. G. YOUNG, M. D., SECRETARY MAINE BOARD OF HEALTH.

In the Fourth Annual Report of this Board and in the preceding reports, the results were given of the more important late investigations into the nature and causes of tuberculosis, and especially that form of human tuberculosis which we call consumption. The evidence presented since 1882, when Koch first announced his discovery of the *bacillus tuberculosis*, has been so plentiful and so convincing, that he who now declares his incredulity as to the infectious nature of this disease puts himself in an unenviable position.

But along with the establishment of the fact of infectiousness, we have made some substantial advances in our knowledge of the conditions and influences under which infection or immunity is the most likely to occur. We have learned

That tuberculosis or consumption does not occur except through the agency of the tubercle bacillus.

That the bacillus, though widely distributed over the earth, is not generally present in the atmosphere, as some other micro-organisms are.

That the multiplication and the development of the bacillus can take place only in a human or animal body.

That the infection of a human being or an animal may occur as the result of breathing in the bacillus, swallowing it in food; or by inoculation through the skin, mucous membranes or otherwise.

That in man, at least, infection occurs, in the great majority of cases, by means of inhaling the virus.

That practically the only source of the inhaled virus is the sputa of consumptives.

That the sputa is harmless so long as it is prevented from drying.

That when dried it is readily pulverized and floated in the air as an invisible, but infectious dust.

That, though the infectiousness of the bacillus is positive and unquestionable, on account of its slow growth it implants itself in the animal organism with some difficulty and only after a considerable lapse of time.

That the power of the bacillus to invade the animal organism, and the power of the animal body to resist the attacks of the parasite are very nearly equally balanced.

That this balance of power may be destroyed, in a way unfavorable to the person or animal attacked, by the repeated re-infection of the system, or by inborn or acquired conditions of debility.

That this balance of power may, on the other hand, be destroyed, in a way unfavorable to the parasite, by conditions or influences which strengthen the general powers of the individual, and probably by conditions or treatment inimical to the bacillus.

That heredity as a factor in the causation of the tuberculosis is much less operative than was formerly supposed.

It will be seen, therefore, that though tuberculosis is an infectious disease, the sources of the bacillus are so few and so well defined, the channels of infection are now so well known, and the growth of the bacillus is surrounded by such limitations, that we can very gladly exchange our former belief in hereditary influence and inevitable fate for the recent one of infectiousness and the preventability of infection.

The importance of this new direction for public health endeavor is of the greatest—is worthy to engage the earnest attention of statesmen as well as sanitarians. The field is broad, and the modern tendency to press toward urban and

manufacturing centres makes the need of work imperative. Consumption has aptly been called by somebody the "great white plague." One of the leading English physicians lately, in speaking of the ravages of this disease in his own country, has said :

Tubercle at the present day carries off annually nearly 70,000 persons in the form of phthisis, at the ages between fifteen and forty-five, the most useful stages of human existence ; it kills more than one-third of the people who die, and nearly half between fifteen and thirty-five. Moreover, in its prolonged and painful course it either prevents its victims from earning their livelihood, or at least interferes greatly with their daily work. Its habit of seizing upon the flower of the population, its slow but almost certain progress toward death, the utter misery of the last few months or weeks of existence—all these are features in the fell disorder that render its study all-important, not only to medical men but also to the statesman, and to all who are concerned with the welfare of the nation.

In the German Empire from 170,000 to 180,000 die yearly from tuberculosis. In our own country Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, estimates the annual number of human deaths from consumption at over 130,000 ; and the deaths from all forms of tuberculosis at 150,000.

CONSUMPTION AS AN INFECTIOUS DISEASE.

Since the publication of the last report, a large number of histories have come to my notice, mostly within the literature of the year, in which the communicability of pulmonary tuberculosis is pretty well shown. The presentation of a few of them may serve a good purpose in helping to impress the fact, that the danger of infection is a real one.

Numerous experiments upon animals have shown that tuberculosis may readily be communicated to them by causing them to breathe air into which the tubercle bacillus has been diffused by the atomization of tuberculous matter, or of the pure artificial cultures of the bacillus. That tuberculosis may be communicated to human beings in the same way, the foolhardiness of one person, at least, has shown. While Tappeiner was engaged in his inhalation experiments upon animals, he was assisted by a servant in his fortieth year, who had always been very strong and healthy, and

was absolutely free from suspicion of hereditary taint. In spite of energetic and repeated warnings to keep out of the inhalation room, this man, to show the freedom from danger in doing so, persisted in entering the room. In this way he acquired the same form of inhalation tuberculosis which he had so often seen given to dogs, and he died fourteen weeks afterward. The post-mortem showed the same changes which had been previously found in the dogs that had been subjected to the experiments.

Recently Vallin, in the French Academy of Medicine, told about a family, whose home the arrival of a consumptive brother transformed into a "house of the doomed," where five persons died of consumption within three years. The family, living in the country in easy circumstances, consisted of father and mother, both of more than sixty years of age, but very healthy, and five children at ages from twenty-five to thirty-two years. The eldest son, living in Paris, became consumptive, and, returning to the home of his parents, died in about six months. Within the two years that followed, there died in rapid succession, a sister of thirty, another of thirty-two, a third of twenty-seven, and finally a son-in-law, husband of one of these young women, who had continued to live with the rest of the family after his wife died. It may be added that the sisters who became infected occupied successively the same chamber in which their dead brother had passed the last month of his sickness. Ten years later the father died of apoplexy, and the mother was then living without a trace of tubercle.

Dr. A. Ollivier, physician to l'Hopital des Enfants Malades, Paris, states that a family previously in robust health occupied two small rooms opening into a narrow court. The parents, a young son, and the baby, slept in one of the rooms. An older son, who had been living elsewhere, contracted phthisis, returned home, and slept in the same apartment. He died January 16, 1883. His mother, who was constantly at his bedside, began to cough, emaciated, and died of the same disease in the following May. Seven days after the death of the mother, her infant had tubercular meningitis, of which it perished, and a little later the older child who occupied the same apartment, sickened and died like the mother. The father only remained of those who occupied the small room, and his immunity was probably due to the fact that he was most of the time in the open air.

Dr. E. I. Kempf relates the following striking instance of infection (*Louisville Medical News*, March 22, 1884): In the fall of 1880, a girl of eighteen years, whose brother had died of consumption, was found to have tubercles at the apices of both lungs. She belonged to a sisterhood, and slept in the general dormitory with the other sisters. In four months nine of her companions began to cough, and were found to have tubercles. No one of the sisterhood had previously had disease of this kind.

Dr. Marfan gives an account of a local epidemic of pulmonary consumption which appears to have been due to infection. In the centre of Paris an office gave employment to twenty-two clerks. The wooden floor was old and uneven, and the building otherwise was far from being in a sanitary condition; but there appears to have been no cases of consumption among the employes before the one of which we are to speak. In 1878, a man who had been in the office twenty-four years, died of consumption after a sickness of three years, during all of which time, excepting the last six months, he had been at his desk in the office, coughing and spitting upon the floor. Since this time, of the twenty-two employes, fifteen have died, one of cancer, and all of the others of consumption. Before the death of the first case, two other men who had been in the office six years, began to cough and spit upon the floor. They died in 1885. For a while the deaths succeeded each other at frequent intervals, the decedents having been in the office for periods of from two to twenty years. It appears to have been the custom to have the office swept every morning, and the sweeping was not usually completed before the arrival of some of the employes. When Dr. Marfan, head of the medical clinique of Paris, advised the office that the probable cause of the heavy mortality had been the inhalation of the infectious dust from the floor; the floor was promptly removed and burned and a new one laid. In future, the sweeping is to be done evenings after the departure of the clerks, and other precautions against the continuance of the trouble were taken.

INFECTION FROM THE ALIMENTARY CANAL.

In the preceding cases it is presumable that the infection was due to the inhalation of the virus—the breathing in of the dried and pulverized sputa. In the following cases the infection was from the alimentary tract.

Dr. W. J. Wilson observed the following case: B. W., aged four months; family history good, and no trace of phthisis or syphilis discoverable in either family. Had had no previous illness, was plump, fat, and well-nourished. The mother was forced to wean the child when but a month old, and it was fed on cow's milk from a bottle, and thrived well for a time; having no digestive troubles. It was attended by a nurse, who was well advanced in consumption, and had free expectoration. The child slept with the nurse, and, consequently, was much exposed to her breath. Nothing unusual was noticed in the child's condition for the first three or four weeks after the nurse's arrival, when it began to loose flesh and cough slightly. This cough and wasting gradually increased, and finally Dr. Wilson was called in. On examination he found well-marked and far advanced phthisis, with frequent cough and great emaciation. The child died in its eighth month, three months after the first symptoms were noticed. The same nurse, who later on died of consumption, attended five other children, and four out of the five died of some wasting disease, but as Dr. Wilson did not see any of them he was unable to state its nature.

A case of infection of an infant through the milk of a tubercular nurse is reported by Dr. Steinberger, of Budapest. An infant aged five months, of healthy parentage, developed caseating cervical glandular abscesses, of a distinctly tubercular kind. Microscopical examination verified the diagnosis. Inquiry elicited the fact that the infant had been nursed for a period of four weeks by a woman who had been discharged on account of phthisis, with abundant expectoration. The etiological relationship was thus clearly established.

Prof. Demme, of Berne, has published the following interesting case:

A four months old boy died of tuberculosis of the mesenteric glands. The microscopic examination of the swollen glands which were partly caseated showed the presence of the tubercle bacilli. In the intestinal mucous membrane, as well as in the other organs, small localizations of tubercle were discovered. Neither on the side of the parents nor of the grandparents had any cases of tuberculosis ever occurred. On the other hand, the child had been fed from birth with the uncooked milk of a cow which was fed upon dry fodder. After the death of the child the physician ordered the cow

to be killed. The finding was interesting and instructive. In the left lung of the cow, medium-sized tuberculous nodules were found containing tubercle bacilli. The microscopical examination of the milk, pressed out from the deeper portions of the udder, also revealed the bacilli.

Heller believes that very probably milk plays a principal part in the so-called hereditary tuberculosis of children. In favor of this view is the fact of the frequency of tuberculosis of the mesenteric glands, just that part of the lymphatic system which must be first affected by the tuberculous virus when introduced into the intestinal tract.

Observations like the foregoing and the results of feeding experiments on animals have shown the danger from the use of milk from suspicious sources, and have led to attempts to determine the magnitude of the danger. An answer was needed to the question whether the milk becomes infectious before the tubercular disease of the cow becomes generalized, and as Bang, of Copenhagen, and others had called attention to the fact that tuberculosis of the udder in the cow is not a rare occurrence, an answer was needed to the question, May the milk become infectious in the absence of tubercular formations in the udder? Hirschberger's recent experiments throw considerable light upon this matter.

He sought to answer two questions: 1. Are the cases frequent or not in which tuberculous cows furnish an infectious milk? 2. In what forms of tuberculosis is the milk infectious? He experimented with the milk of twenty cows affected with tuberculosis of various grades. The milk taken with the necessary precautions was inoculated into the peritoneal cavity of guinea-pigs. His answer to the first question is that the danger of infection from the milk of tuberculous cows is not only present, but it is a very great one; in fifty-five per cent. of all the samples experimented with, the milk was shown to be infectious. In answer to the second question, his results show that the danger of the infection is greater in advanced cases, in which the disease is generalized, but that it also exists in those cases in which the disease is entirely local. From tuberculous cows in which the wasting is marked, the milk is generally infectious; from those that were in good order, he found thirty per cent. to be infectious. The milk from eighty per cent. of advanced, sixty-six per cent. of medium grades, and thirty-three per cent. of localized tuberculosis, was found to be infectious.

The Massachusetts Society for the Promotion of Agriculture employed Dr. Ernst to investigate the question, as to the danger from the use of the milk from tuberculous cows, and at what stage in the disease the milk becomes infectious. Thirty-six cows suffering from tuberculosis other than of the udder were used in the investigations, and 114 samples of milk from them were examined; seventeen samples from ten different cows were found to contain the bacilli of tuberculosis.

Well animals were then inoculated, with the result of inducing the disease in fifty per cent. of the cases subjected to the experiments. Feeding experiments were also made, with the result of inducing the disease in a number of calves and young pigs. The following conclusions were presented: 1, and emphatically, that milk from cows affected with tuberculosis in any part of the body may contain the virus of the disease; 2, that virus is present, whether there is disease of the udder or not; 3, that there is no ground for the assertion that there must be a lesion of the udder before the milk can contain the infection of tuberculosis; 4, that on the contrary, the bacilli of tuberculosis are present and active in a very large proportion of cases in the milk of cows affected with tuberculosis, but with no discoverable lesion of the udder.

It will thus be seen that Dr. Ernst's results and conclusions are essentially the same as those to which Dr. Hirschberger arrived.

The Tuberculosis Congress in Paris spent much time in the discussion of the question as to the permissibility of using as food the flesh of tuberculous animals in the earlier stages of the disease. There was a difference of opinion as to the expediency of absolutely interdicting the use of such meat. Recognizing the difficulty of drawing the line to divide the cases in which the flesh may be used, the Congress eventually passed a resolution to the effect that all animals affected in any degree with tuberculosis should be seized and condemned as unfit for food. This was carried with only three dissenting votes.

At Munich some experiments have been made by Steinheil as to the possibility of infecting guinea-pigs with the products from the muscles of persons affected with phthisis. The material used was portions of the psoas muscles of nine patients who died of phthisis. The muscle was cut up into very fine pieces, and submitted to the pressure of a screw-

press. The juice obtained was injected into guinea-pigs. Of eighteen guinea-pigs thus treated, fifteen died of tuberculosis, although no tubercle could be detected in the muscles so used. Steinheil draws the conclusion that the muscular flesh in advanced human phthisis is infectious as a rule; hence the possibility that the flesh of animals infected with bovine tuberculosis is dangerous can not be denied.

Kastner undertook a similar research as to the infectiousness of the muscles of tuberculous cattle.

Infusions of the meat were injected into the peritoneal cavity of guinea-pigs. Out of sixteen animals thus treated, twelve remained healthy. He concludes that special dangers from infection are not to be feared, save in the rare cases in which tubercles are to be found in the muscles.

From the juice pressed from the meat of a cow seized on account of local tuberculosis, but fat and in good condition, Veyssiere inoculated two rabbits and caused tuberculosis in both.

Drs. Straus and Wurtz presented a communication to the Tuberculosis Congress on the action of the gastric juice upon the tubercle bacillus. Experiments made by them had shown that prolonged action of pure gastric juice upon the bacilli was necessary in order to destroy their virulence. The time required was at least six hours. It was therefore useless to expect that the bacilli could be destroyed by this secretion after their introduction into the human stomach.

TUBERCULOSIS FROM INOCULATION.

A third way in which the tubercle infection may be received is by inoculation, and the following cases show how accidents of this kind may occur.

Nocard, in the discussion on tuberculosis, mentioned that Moser, a veterinary surgeon of Steiner, died from a tuberculous infection received while making a post-mortem examination of a tuberculous cow.

Dr. Lesser, of Leipzig, gives the history of a case of inoculated tuberculosis in a woman who washed the clothing of her consumptive husband.

The infection resulted in a tuberculous growth the size of a cherry on the lower part of the right forearm. Its removal was followed by tuberculous granulations, which healed after their removal by scraping. Lesser also refers to a case of Merklen's in which the inoculation occurred on the fingers and advanced to a general and fatal tuberculosis. The

patient was a woman who for six months had washed the clothing and the spittoons of her consumptive husband.

The same author referred to the cutaneous tubercles which are seen in the faces of children not so very rarely, and which are to be regarded as tuberculosis. Several cases of the kind are given. Most of the cases of inoculation of tuberculosis of course occur in the sites of abrasions or wounds of the skin, but Lesser thinks infection is possible by the way of the sweat glands in the uninjured skin.

As to the future results of such subcutaneous inoculations it is said that from no other point does the tubercle bacillus find so much difficulty in invading the general system as from the skin. Many of the cutaneous tubercles disappear spontaneously, and if the virus reaches the nearest lymphatic glands, it may there remain stored up for months or years, or even for the whole lifetime, without leading to general tuberculosis.

Dr. Gerber, of Konigsberg, relates his own unfortunate inoculation with tubercle virus while making the section of the lungs of a patient, in November, who had died of consumption. In so doing he received a slight cut on one of his fingers. Pain and febrile symptoms of short duration followed, and a tumor the size of a cherry formed on the site of the cut. The local tubercular growth was excised in March following. Soon afterward the glands in the arm-pit began to swell and eventually formed a mass larger than a goose egg. In the meantime the doctor had fallen into a hectic condition with a remarkable depression of the nervous system. In May the radical extirpation of the infected glands was undertaken, and a cure was effected which seemed to be permanent.

During the past year Dr. Cornet, of Berlin, has made some investigations to determine the points of entry of the virus in tuberculous infiltration of the glands.

He showed some guinea-pigs into whose conjunctival sacs some sputum containing tubercle bacilli had been placed. No injury of the sac took place. Notwithstanding this, the bacilli grew, penetrated the tissues, and set up swelling and hyperplasia of the conjunctiva. In all the animals caseation and softening subsequently took place in the neighboring glands. The side on which the inoculation took place showed the most extensive changes. In two other animals the nasal mucous membrane was painted by means of a pigeon's feather, with bacillary sputum in one case, and a

pure cultivation of tubercle bacilli in the other. The corresponding glands became tuberculous in both cases. In other cases the cavity of the mouth was inoculated with sputum or pure cultivation material, and all the corresponding glands became tuberculous. In another guinea-pig infective material was introduced into the ear and the auricular glands became subsequently caseous. In still another animal the skin over the nose was shaved clean and sputum rubbed in, when later on a serpiginous ulcer covered with a thick scab, reminding one of lupus, was observed; the cervical glands became much enlarged. Another animal was scratched on both cheeks with a finger-nail dipped in tuberculous sputum, and the ulceration, covered with scab, that followed, spread and became confluent. Another animal was rubbed, but without abraiding the surface, with a wash-leather that had been dipped in bacillary sputum; after some weeks it was killed, when the corresponding lymph-glands were found enlarged. He concluded that tubercle bacilli could penetrate into the system without causing distinguishable injury at the point of entry. The nearest lying glands became tuberculous, and illness developed resembling scrofula as it was often seen, and without doubt scrofula depended on a tuberculous infection from without. This was less remarkable when we remembered how incautiously we treated phthisical sputum, and how frequently children made a way for the entrance of disease by putting every possible object within their reach, covered with tuberculous dust it might be, into their mouths, up their noses, or into their ears.

Other ways than those suggested in the foregoing histories are conceivable in which tuberculous infection may take place by the way of the alimentary canal or by infection. Carelessness and want of cleanliness on the part of consumptive patients or their attendants, may transfer the infective agent to human food or drink, or to abraided skin or mucuous membrane. To illustrate how much æsthetics has to do with hygiene, Cornet relates that he once observed a young lady of an aristocratic family who was consumptive go to the table after smearing her fingers with her expectoration.

Selections.

Kansas City District Medical Society.

The sixty-third quarterly meeting of the Kansas City District Medical Society was held at Pythian Hall, Kansas City, Mo., on Thursday, June 6, 1890, the President, Dr. E. H. Miller, in the chair.

Dr. John Wilson, of Kansas City, presented an essay on *The Selection of Anæsthetics*.

DR. JOSEPH SHARP:—As the action of anæsthetics is exerted upon the nerve centers, the most important points for study lie in these rather than in the heart, which as a rule is only affected secondarily through the nervous centers; but the action upon the blood itself, especially the relation of the anæsthetics to oxygenation of the blood, is also an important study. This Hyderabad chloroform commission has really not brought out anything new; Americans (who have been strong adherents of chloroform, except in the extreme East, where the profession follows as closely as possible the action of English surgeons) have always maintained the superiority of chloroform over ether; and many have taught for years that the respiration and not the pulse should be watched for the appearance of the danger-line. Lauder Brunton and his associates have simply confirmed this view of the case—nothing more. As to the advice to use injections of ether to stimulate the heart's action when flagging under chloroform narcosis, or the free use of alcoholic liquors for the same purpose is, it seems to me, not founded upon common sense: all belong to the same group—their action (secondary, at least,) is very much the same, and it is unreasonable to use remedies that act alike as antidotes for each other. It is urged that alcohol will not, except in excessive doses, produce anæsthesia; but I am of the opinion that if the vapor of absolute pure alcohol were inhaled as ether is, profound unconsciousness would occur. But while in our studies of chloroform we should remember that the drug first affects the higher nervous centers, then the reflex centers, and lastly the deep or vital centers, and that as the latter become involved in the narcotic influence, the respiration and circulation begin to be affected and an element of danger come into the case; at the same time we should not forget that chloroform may in

some instances affect the heart muscle itself; greatly depressing the heart's action, or even stopping it altogether; so paralysis of the heart muscle must be watched for, especially at first. Yet certainly, as Brunton has finally concluded, the respiration should be the guide to danger in the administration of chloroform; still "first impression" must be borne in mind, because some patients die very early in anæsthesia from shock of the nervous centers by too early attempts at operation—the nervous impulse sets into action the inhibitory nerve of the heart by reflex irritability and the patient dies. By carefully deferring any operative procedure until the subject is fully under the influence of the anæsthetic, this danger may be avoided.

DR. H. CROWELL:—The statement of the Hyderabad commission regarding the action of chloroform upon dogs—especially that the respiration ceases for some time before the heart's action stops—does not agree with all investigations. These experiments were made in India, where the surroundings, climate, etc., are quite different from in England and America, and upon Pariah dogs. This is urged as an objection to the conclusions drawn by the commission so far as applies to Great Britain and the United States. Horatio Wood and Hobart A. Hare have recently made a series of experiments as nearly parallel to those of the Hyderabad commission as possible, and they claim that invariably the heart's action ceased prior to the suspension of respiration; and hence that the results of the commission do not apply to this latitude and to American dogs. We have nothing yet which conclusively shows that chloroform was safer than ether as an anæsthetic, nor shall we have until every death from both drugs is faithfully reported. As things now are, owing to the prejudice in England and the Eastern States against chloroform, deaths from this anæsthetic are not reported because of a fear of censure; and, on the other hand, while deaths from the administration of ether occurring at the time of anæsthesia are reported because of their comparative rarity, the deaths secondary to its use—as from kidney troubles, secondary bronchitis, etc.—have not been reported. So all is yet unsettled and can only be made out by long and careful investigations.

DR. JOHN WILSON:—Lauder Brunton has always been the violent opponent of chloroform. The first commission made substantially the same report as that now published, but Brunton disagreed, and the *London Lancet* claimed that

the investigation was conducted unskillfully and unscientifically, and both Brunton and the *Lancet* decided that the results were absolutely valueless. Hence the recent commission was constituted with Lauder Brunton at its head; competent, scientific surgeons were selected, and—the results were uniformly *the same* as those of the first commission, completely establishing the fact that respiration ceases before the heart's action is arrested, and should therefore be watched as the danger signal, the condition of the pulse amounting to little. In this conclusion Brunton heartily concurred. And he says the effect of chloroform is exactly the same upon human beings as upon dogs, monkeys and horses, the animals used in the experimentation, I believe that for *complete* anaesthesia chloroform is the best agent we possess, because it does not cause the asphyxia which must exist in ether anaesthesia, where the air is rigidly excluded during the administration; it is indeed problematical whether the unconsciousness is not as much due to asphyxia as to the action of the ether. But if the operation is to be done under semi-anaesthesia, ether is much safer; however, few operators dare begin to work until unconsciousness is complete.

DR. H. C. CROWELL read an excellent paper under the title of *The Treatment of Dysmenorrhœa*.

DR. JOSEPH SHARP:—I want to take exception to the statement that rapid dilatation of the cervix necessarily causes the patient to go to bed. I have frequently made rapid dilatation at my office, and allowed the patient to go home in the car or in a carriage soon afterward. I have done this even in cases of stenosis with elongated cervix—not to extreme dilatation with a Goodell's dilator, to be sure, but sufficiently large for all practical purposes with a Wylie's dilator; at least, sufficient to cause disappearance of the painful menstruation. Two or three hours in bed is, at most, all that is required for the patient to be quiet after such a dilatation, and Goodell himself says that extreme cases only require two or three days in bed. But I believe rapid dilatation is too often practiced, especially in cases where the uterus is unusually small, as is often the case, particularly early after the beginning of menstruation; in such cases slight dilatation and other treatment calculated to develop the too small uterus, is all that is indicated.

DR. EMORY LANPHEAR.—I would like to ask the essayist this question: Is not dysmenorrhœa, particularly in girls

when the menstrual function is just being established, quite often due simply to anæmia? Perhaps he classes his anæmic cases under neurotic or nervous dysmenorrhœa, but it is my opinion that many cases are wholly dependent upon anæmia. I know from experience that one-half of the cases of painful menstruation require no local or operative treatment; in very many cases the administration of iron or other agents calculated to remove the anæmic condition will cause the disappearance of the dysmenorrhœa, and at the same time of the "spinal irritation," the headache, the neuralgia and other symptoms of "nervous disturbance,"—all are but manifestations of anæmia. But in every case a careful examination should be made in order to determine the cause, and if there be anything requiring local treatment or operation, no hesitancy should characterize the action of the physician; for the destruction of the hymen (where one exists, which is not very often, so far as I have been able to discover) amounts to nothing, because it is now pretty generally understood that the absence of the hymen does not mean loss of virginity, nor its presence necessarily prove it. It is not, therefore, any delicacy about this, nor yet any reluctance to operate or employ local treatment when indicated, that makes me protest against this indiscriminate gynæcological interference (because when necessary I attend to such matters without any hesitation); but I sincerely believe that more than one-half of all cases depend upon non-development, anæmia, or other general troubles that may be removed without local treatment. But I do insist, with Dr. Crowell, that a careful examination be made in every case to determine the cause; then, and then only, can the physician act intelligently by operative procedure or otherwise as the case requires.

DR. D. R. PORTER:—I, too, have got into the habit of treating few of these cases locally. I used to use local measures in almost every case—in fact, the most of my patients were treated by dilatation; but observation has shown me that in many instances more harm than good resulted from the local treatment. So of late I have not been doing much cutting or dilating. There is a great similarity, so far as my change of base is concerned, between my treatment of dysmenorrhœa and that of prostatorrhœa and other troubles of the deep urethra; I used to think I couldn't cure a case of prostatorrhœa or chronic inflammation of the deep urethra without the use of sounds

—now I rarely use them, as they do more harm than good except in stricture. The same is true of a stenosis or stricture of the cervical canal. Of course, if the cervix is greatly elongated, or if the stenosis is marked, an operation is indicated ; but, as Dr. Lanphear says, general treatment will cure in the majority of cases, especially if glycerine and hot water be used locally. In anæmic cases, iron is the drug to be relied upon, but we have a form of dysmenorrhœa in plethoric subjects, due to spasmodic contraction of the uterus ; here a good dose of Epsom salts, or other saline, given just at the beginning of the menstrual period, will arrest the attack.

DR. F. M. JOHNSON :—It is well to differentiate between the pain due to a diseased condition of the ovaries or of the tubes from that which may be called a true dysmenorrhœa ; that is to say, all pain at the menstrual epoch is not “dysmenorrhœa” as the term is usually defined. In any given case we must determine whether or not these organic diseases are present, and if so remove them ; diagnosis is therefore very important, and it will not do to simply give an anodyne and tell the patient “it will be all right next time ;” for if there be diseased tubes or ovaries they must be removed. Again, dysmenorrhœa in young, unmarried women, or in those yet undeveloped, or in school-girls too deep in study, is very different from that often met in married women, and requires different treatment. In school-girls the trouble is often due to want of development. Here we must palliate until nature can complete her work—sometimes we can supply agents to assist. Some cases may require local applications to the endometrium for inflammation, but I can not believe that flexion alone often causes the trouble, because flexion alone is not necessarily a pathological condition. I expected Dr. Crowell to mention the curette, which is now being highly lauded as an instrument for the cure of dysmenorrhœa. I believe it is being used too frequently—while it is sometimes useful, it is not often indicated.

DR. E. H. MILLER :—All treatment must be decided upon according to the cause. Dysmenorrhœa is a term that ought to be abolished, as it is not a disease—merely a symptom. As for stenosis, dilatation is certainly required, and is a far more serious operation than Dr. Sharp would lead us to believe ; the patient should be put to bed at once, and kept there some days. In two cases I have

recently used Outerbridge's tents for dilating the canal during menstruation. These are spiral, hollow tents, which hold the cervical canal open and allow the fluid in the uterus to pass through the hole in the middle of the tent. The first case was one in which the pain was so great as to cause convulsions occasionally, and fainting often; she had repeatedly been operated upon with but little help. Four days before her menses were expected I introduced one of these instruments, and there was, for the first time in the patient's life, absolutely no pain; it was removed just after the cessation of the flow, and again put in just before each month's recurrence. There has been no trouble since beginning its use. The other had been treated indefinitely without benefit, and has now been relieved surely and satisfactorily by this means. Quietude is to be enjoined for twenty-four to forty-eight hours at the beginning of the flow: this is often neglected in the treatment of all uterine diseases, but never should be.

Dr. Joseph Sharp gave some very interesting remarks upon the "DIETETIC TREATMENT OF CORPULENCE."

He said, in substance: We daily encounter persons extremely spare or exceedingly fat, engaging in active pursuits without apparent discomfort or great inconvenience; so that a lack of fatty tissue or an abundance of the same is not necessarily pathological. Certainly the observation of the writer has led him to believe that these persons, whether very spare or fat, and who are nevertheless capable of following occupations requiring activity of mind and body, are not as a rule disproportioned in the relation of chest capacity to height; the thin ones have bigger chest measurement than was expected, and the fat more expansion than the average. This impression, like many others acquired by comparatively few and isolated observations, may perhaps be utterly false as far as the rule of men; I simply mention it as a suggestion to other observers. Then the fact that fat persons carry on laborious and trying occupations and are capable of prolonged and severe muscular effort, is evident that fatness does not always mean disease. I have known a foot-racer not over five feet and ten inches in height, who has habitually weighed more than two hundred and fifty pounds, and was "open to all comers" for one hundred yards to a quarter of a mile, and he was usually successful. While traditionally the fat man is sluggish in mind, good-natured in temper and easy-going in

body, yet all of us can recall many exceptions where vigor of mind, firmness of will and physical powers were equal to any of us. Even the definitions of the term employed to express the condition, as found in Billings's Dictionary, are very obscure as to what would be a pathological condition, as "corpulency" is "obesity or great fatness." "Obesity" is "a condition of being unduly corpulent." Yet we often see cases where disease is caused by fat.

To understand the indications for treatment in any given case of derangement of the bodily functions by fat, it is necessary to look at the part the latter plays in the economy. First: Fat is tissue stored up in the organism, to be destroyed when needed for the production of force or animal heat. The loss in weight of various tissues in a dog nearly dead from starvation will bring out the truth in this proposition, and it is well to keep in mind, as has been pointed out by Robert Meade Smith, the relative bulk and importance of the various tissues of the animal body. The skeletal muscles make up about one-half of the body, and contain about one-fourth of the blood of the body, while another fourth is found in the liver. In death by starvation 97 per cent. of the fat is lost, making usually about 26 per cent. of the total bodily weight lost; of muscular tissue there is a loss in weight of 30.5 per cent., or 42.2 per cent. of the total loss; the liver loses 53.7 per cent. of its weight, the spleen 66.7 per cent., the kidneys 25 per cent. We see, then, that upon the adipose tissue rests the chief supply in case of starvation—comparatively the other parts of the body suffer but little—the brain and spinal cord being almost exempt (losing only 3.2 per cent., and the heart losing almost nothing—2.6 per cent. How closely these experimental data agree with clinical observation in emaciating diseases, we all know. The inference, justifiable from these facts, is that fat is the tissue of stored products, and the liver and spleen, from their relation to carbo-hydrate products, glycogen, are in a measure storehouses of reserve force. These observations in starvation show that the albuminous tissues waste, after the exhaustion of the food reserve, increase slowly from day to day, and are in no wise proportionate in ratio to the amount of proteids in the whole body. Another observation in this is worthy of note, that wherever destruction of proteid tissue reaches a certain point, death speedily follows: further, that in herbivorous animals with little albuminous tissue reserve—starvation

beyond a certain number of days produced death soon if food was resumed, or in other words, the tenacity of organism is much less than that of carnivorous animals. Secondly, fat plays an important part in constructive and destructive metabolism. This is easily demonstrated by experiment, and is of daily clinical observation in the destruction and restoration of tissues in fevers. Habitual over-work or prolonged strain may lead to fatty degeneration of vital organs—the heart, the brain, etc. Why do certain persons accumulate this reserve to the extent of disturbing the functions or replacing more active and vital tissues? First, on account of heredity. Second, by over-feeding. Third, by under-destruction of fats—or failure to use them up. Fourth, by occupations—some persons readily acquiring fat by the nature of their vocations, as sail-makers, photographers, tanners, inn-keepers, agents, lawyers, dentists, grocers, bar-keepers, and servants. Lastly, an improper character of food may have much to do with the production of fat, there being too much food taken in the form of fats, carbohydrates, etc. Every case of suffering from an over-accumulation of fat or of fatty degeneration of an organ must have a different indication from all others, according as one cause or the other predominates; and an observation of the various causes shows why in some instances the line of treatment necessitates rigid abstinence from food, while in others fats and fat producers may be freely given. A study of the various methods of curing this condition, shows one feature in common in Banting's, in Ebstein's and Oertel's diets—they are all *short diets*. In addition to diet there are some things of use; particularly, the patient must be prohibited from drinking much water and the taking of an abundance of exercise insisted upon. Two cases were recently seen by the author: S—, a female, age 40, of large frame, but five feet eight inches height, with hereditary tendency to accumulation of fat, of sedentary habits and full diet, had become distressingly fleshy. She was put upon decided exercise only; the result was rapid improvement. August 1 she weighed 188 pounds; September 1, 179 pounds; October 1, 169 pounds, and February 1, 164 pounds. This was accomplished by walking alone. O—, female, age 35, blonde, no hereditary tendency, not of sedentary habits, five feet and two inches in height. There being no special indications for exercise, she was placed upon a proper diet, and improvement was satisfactory. A diet table suitable for all

cases can not be given, but the subjoined is a good basis for modification to suit special cases :

ANTI-FAT DIET.

Patient may take :—Soups; Beef, Mutton and Chicken Broths, Fish; all kinds except Cat and Salmon; Lean Beef, Lean Mutton, Chicken, Game; Lean Ham and Dried Beef; Eggs (one at each meal); Veal; Buttermilk; Vegetables: Asparagus, Cauliflower, Onions, Spinach, Celery, Cabbage (cooked in water with lean Meat), Tomatoes, Radishes, Lettuce and Greens; Bread: White, Graham or Corn, (sparingly), Gluten Biscuits (not more than 4 ounces per diem); Fruit: Grapes, Oranges, Cherries, Berries, Peaches, Sour Apples and Lemons; Drinks: Water, Tea or Coffee (without sugar or cream) in moderation.

Patient may not take :—Fats in any form, Thick Soups, Sauces and Spices, Hominy, Oat Meal, Sweet and Irish Potatoes, Rice, Beets, Carrots, Parsnips, Starches, Pies, Puddings and Cakes, Much Water.—*Kansas City Medical Index.*

Concerning Resorcin, and a Particular Method of Using it in Skin Diseases.

BY SAMUEL SHERWELL, M. D.

DR. P. DRECKMAN-RECKLINGHAUSER (*Monatsheft. f. Pract. Derm.*, Vol. X., No. 9, p. 389). The author gives the credit of the discovery of resorcin to Hlasiwetz and Barth, 1863, it being a product formed by transposition of elements in various of the resins under treatment. In 1868 it was first prepared synthetically by Korner, from metajodphenal and kalium, and first employed and recommended by Andeer. Since then its use has become common, and advantageous in various forms of skin disease. He looks upon it as possessing antiseptic, antifermentative, and antifebrile properties, and further that if used in too strong a manner, on account of these very properties it may become harmful, if not absolutely toxic.

He believes Andeer is right in using it particularly in cases of acute infectious diseases of the skin in particular.

The author goes on to quote a number of German authorities, as Nussbaum, Ihle, Rubing and others, who used this medicament with always beneficial, and sometimes extra-

ordinarily good effect, in the treatment of variola, sycosis parasitica, herpes tonsurans, epithelioma, etc., and further remarks that it was left to Unna, of Hamburg, to find or describe its method of therapeutic action, the latter dermatologue having included it among his "reduction" medicinal agents, by that meaning it was one of those substances that wherever applied to the surface in skin disease it also had a tendency to deprive the part of some oxygen; as is claimed by Unna, does chrysarobin, pyrogallol, ichthyol, sulphur, linseed oil, etc., thus causing a relatively more rapid hardening of the young epithelial cells.

The author then goes on to speak of the use of the impermeable bandage, using the names of a great many European medical men, but without referring to the U. S., in which country I believe it was first used for the treatment of skin diseases.

After a great deal of unnecessary writing as to the well-known disadvantages of (at least) continuous use of the impermeable bandage applied next the skin, the doctor goes on to describe his method of using the remedy, which he does by a mediate application; bandaging first with soft and absorbent bandages, saturating these dressings with about a three-per-cent. solution of resorcin, and putting a waxed-cloth dressing over the whole instead of a rubber, as being less irritating and offensive, etc., so that, for instance, the limb affected may be surrounded with a continuous warm vapor and the volatilized remedy.

He give various cases of obstinate eczemas where it has been used with good result, which is doubtless so. He adds, however, that where its use is needed for stronger action the salves are preferable. Also true according to our opinion.

ON THE PRESENCE OF MERCURY IN A TAPEWORM COMING FROM
A SYPHILITIC PATIENT BEING THEN TREATED BY
MERCURIALS.

Dr. Ludwig Oelkers (Centralblatt. f. Bacteriologie, Nov. 7, 1889) says: A syphilitic patient in one of the clinics at Gottingen, being at the time treated by mercurial inunction, passed from time to time segments of tape-worms, which attracted attention by their gray color. By microscopic examination the presence of mercury was established in the vas deferens, in some of the vasa efferentia, and testicula of the parasite. The vagina appeared as a veritable mercurial

tube. Also in the parenchyma of the limbs generally were to be seen everywhere minute particles of metallic mercury. The observer states, in conclusion, that notwithstanding this relatively great amount in the parasite, its vital functions did not seem to have been impaired thereby!

ON THE CONNECTION OF GENITAL AFFECTIONS WITH THOSE OF THE SKIN.

Dr. E. Frank (Prag. Med. Wochenschrift. No. 6, 1890). At the meeting of German Medical Society in Prague, Dr. Frank related a case of urticaria chronica complicated (caused by?) with bilateral oophoritis and salpingitis. After radical operation for relief of latter affections she remained entirely free from the skin affection. Dr. F. believes this to be entire free from the nervous or reflex character of that affection in this case. The connection of cause and effect was entirely manifest. Synchronous beginning of both troubles, increase of symptoms and eruption at the menstrual period, etc., and complete cure when the offending organs had been removed.

A CASE OF SCARLATINA INFECTION BY MEANS OF A LETTER.

Dr. Nikolski (Wratsch, No. 37, Russia). At a manufactory in the beginning of January, 1888, numerous cases of scarlatina appeared. Among others affected was a young girl, æt. nine, who, about the end of the second week of her sickness, wrote a letter to a girl friend, named B., who, though a scholar, had not been to her school, nor had for a long time left her village home, which was perfectly free from scarlet fever. About four or five days after receipt of the letter, she began to suffer from the prodromata, and five days later the eruption had broken out fully.—*Brooklyn Medical Journal.*

Salicylic Acid in Dermatology.

THE gemicide properties of this well-known agent have been carefully determined. Sternberg found that a pus micrococcus in active growth was destroyed by a two per cent. solution of the acid, and that the bacterium *termo* was killed by a like solution. As unusual skill and care is needed for the preparation of the pure acid, many samples to be had from druggists are unsatisfactory in their action

upon the skin, chiefly on account of the presence of carbolic acid.

The action of pure salicylic acid upon the skin is quite peculiar. When a plaster or ointment containing from thirty-eight to fifty per cent. of salicylic acid has been applied, the epidermis beneath it becomes gradually white and soft, so that it can be scraped off with the back of a knife. A reddened oozing surface is exposed, upon which, by the aid of a lens, the papillæ, rich in vessels and nerves, may be seen, projecting like so many carrots planted irregularly, with their roots up. Very little or no dermatitis is excited in the parts surrounding the application, except in cases of peculiar idiosyncrasy.

In the *Johns Hopkins Hospital Bulletin*, April, 1890, Dr. Morison calls attention to these facts concerning salicylic acid, and mentions certain cases in which he has found it of value. He first saw it used at a clinic at Prague in 1882, and found it in respect to cleanliness to greatly surpass and in efficiency to equal the ill-smelling tar preparations of the Vienna clinics. He uses it now quite extensively in his practice.

It is a good remedy for freckles and other *pigmentations*, as it readily removes these blemishes, and, in his experience, never of itself causes deposit of pigment. Through its germicide properties it quickly destroys the growths of *tinea versicolor* and *ringworm*. A case of chronic and very obstinate ringworm of the face and arm is cited, in which each spot was washed for five minutes with *sapo viridis* and warm water, and then covered with a solution of bichloride fifteen grains and salicylic acid sixty grains in an ounce of collodion. There was intense pain and slight blistering, but no further application was required except lanolin containing five per cent. of salicylic acid. The cure was very remarkable.

Chronic *eczema* yields readily to the stronger salicylic preparations. In one case, a healthy man of forty-five years consulted him concerning a chronic squamous eczema of the wrist and palm. It worried the patient very much, especially when he became warm in bed, and had for two years resisted all treatment. A thirty-eight per cent. salicylic acid plaster was applied and fastened tightly to the affected parts by means of a bandage. As the skin was not much affected after twenty-four hours, a fresh plaster was put on. This application, unlike the former one, caused intense pain,

and upon its removal next day the epidermis was found to be soft and white. Without disturbance of the dead epidermis, a fifty per cent. ointment of salicylic acid in lanolin was rubbed in frequently and kept on by gloves. In from seven to ten days a complete cure was produced. The patient was discharged, with orders to rub a little of the five per cent. ointment on the parts which had been diseased every time he washed with soap and water.

The salicylic acid treatment is of great value in *psoriasis* of long standing. A case is related in which a man had suffered for twenty years from psoriasis numulata et orbicularis, having large spots on the forehead and on both sides of the nose. Sapo viridis and hot water were used to remove the scales, and an ointment containing sixty grains of salicylic acid to the ounce of lanolin was rubbed into the affected skin. In a week considerable improvement was noticed, and at the end of a month only a slight discoloration could be observed on the face, which had once been greatly disfigured, and the lesions on the other parts of the body were also disappearing.

Salicylic acid may be applied in several different ways. It is only slightly soluble in water, but dissolves more readily in this liquid when sodium baborate is added. When it is desirable to apply it in powder to the skin, Dr. Morison prefers to make a saturated solution in alcohol, which dissolves it readily, and to allow the alcohol to evaporate, leaving the acid behind in the form of a finely divided powder. Unna rubs the powdered salicylic acid up with gelatine and glycerine, no solution being formed, but a useful mixture. Ointments of various strengths may be similarly prepared with lanolin. Unna has prepared plasters, containing from five to fifty per cent. of salicylic acid, which have rubber backs and stick well to the skin.—Editorial in *Maryland Med. Jour.*

Bloodless Amputation at the Hip-Joint.

X At a meeting of the New York Academy of Medicine, held April 14, 1890, and reported in the *New York Medical Journal*, May 10, 1890, Dr. John A. Wyeth presented two patients to the Society, upon whom he had done an amputation at the hip-joint for sarcoma of the thigh, and also read a paper on this operation as devised and carried out by him.

It is well known that the high death-rate after hip-joint amputation is chiefly due to hemorrhage. Compression of the aorta or common or external iliac has not rendered the operation less dangerous. The figure-of-eight elastic bandage of Esmarch carried above the crests of the ilium or around the abdomen, and the transfixion with a single needle passed in front of the neck of the femur and beneath the vessels, over the ends of which a rubber cord is carried only in front of the thigh, as advised by Trendelenburg, are improvements on older methods, but are far from satisfactory.

The operation is described by Dr. Wyeth as follows:

The patient being placed in position, with the hip of the side to be operated on well over the corner of the table, the foot is elevated and an Esmarch bandage applied to drive the contained blood towards the heart. The bandage should not be tightly put on over the seat of the disease for fear of driving septic matter into the circulation. With the rubber bandage still in position, the needles are next introduced.

Two steel mattress-needles, three-sixteenths of an inch in diameter and a foot long, are used. The point of one is inserted an inch and a half below the anterior superior spine of the ilium and slightly to the inner side of this prominence, and is made to traverse the muscles and deep fascia, passing about half way between the great trochanter and the iliac spine, external to the neck of the femur and through the substance of the tensor vaginæ femoris, coming out just back of the trochanter. About four inches of the needle should be concealed by the tissues.

The point of the second needle is entered an inch below the level of the crotch internally to the saphenous opening, and, passing through the adductors, comes out about an inch and a half in front of the tuber ischii. No vessels are endangered by these needles. The points are protected by corks to prevent injury to the operator's hands.

A piece of strong white rubber tube half an inch in diameter and long enough, when tightened in position, to go five or six times around the thigh, is now wound very tight around and above the fixation needles and tied.

The Esmarch bandage is removed and five inches below the tourquinet a circular incision is made, and a cuff which includes the subcutaneous tissues down to the deep fascia is dissected off to the level of the lesser trochanter, at which

level the muscles and vessels are divided squarely and the bone sawed through. All vessels (including the veins) which can be seen are tied with catgut and the smaller bleeding points can be discovered by slightly loosening the tourquinet.

The remaining portion of the femur is now easily removed by dividing the attached muscles close to the bone and opening the capsule as soon as it is reached. On lifting the end of the bone in the direction of the patient's navel and dividing the cotyloid ligament posteriorly, the air enters the cavity of the acetabulum and greatly facilitates the division of the ligamentum teres.

The closure of the wound, with proper drainage, follows: The entire procedure requires the strict asepsis of modern surgery.

One other important point I wish to emphasize—viz., the advisability in certain cases of doing this operation in two sittings.

In one of my cases the patient was greatly exhausted, and after dividing the femur at the lesser trochanter and securing the vessels, fearing the supervention of shock as indicated by the pulse, I closed the wound, which healed by first intention. At the first dressing (on the seventeenth day), the remaining portion of the bone was removed by an incision over the trochanter major. The recovery was uninterrupted.

I should prefer to complete the operation at one sitting, but cases will occur where the danger of shock may be obviated by stopping short of enucleation, leaving this for a week or two, when reaction and convalescence are assured.

In neither of my cases was there any bleeding, and in two additional operations by this method, very recently performed by two distinguished surgeons of this city, there was perfect immunity from hemorrhage. In fact, amputation at the hip-joint is now a bloodless operation. X

Oedema of the Lungs in Parturient Women.

BY HELEN W. BISSELL, M. D., ST. PAUL, MINN.

So little has been written in regard to oedema of the lungs, as it occurs in women at the time of child-birth, that that I felt the causes, treatment and result in three cases that came under my care in quick succession would be of

general interest. The first occurred in August, 1887, and was printed in the *New York Medical Record* the following December.

Miss A., a primipara, thirty years of age and apparently in fairly good condition, was admitted to the Maternity Department of the New England Hospital at 4:40 A. M. She had been in labor since 2 o'clock, her pains occurring regularly, every five minutes. The cervix was obliterated; the os dilated about one inch; the head, apparently large, low down, fixed and incompressible. There was no oedema of ankles or face, and no casts in the urine, but the large amount of albumen indicated the probability of severe renal disease. The external measurements of the pelvis were somewhat less than normal. Her pains continued frequent and of good character, so that when the membranes ruptured, at 7 A. M., everything seemed progressing favorably. At 8:45 her pulse became suddenly weak and rapid, and in spite of stimulants remained at 126. At 9 o'clock a small amount of mucus in the trachea troubled her with each pain; in a few moments this became more marked, and fine rales could be heard over the entire chest, and with each uterine contraction the patient became cyanosed and gasped for breath. Mustard was applied externally and carbonate of ammonia given. Forceps were applied, of course without the administration of ether, but as a good amount of force was found to be necessary to move the head, and with each traction the pulse became more feeble and running, the oedema greatly increased and death seemed imminent, their use was for the time suspended. A hypodermic of morphia sulphate, gr. $\frac{1}{8}$, and atropia sulphate, gr. 1-120 was given, after which she improved for a time, but soon she grew worse and died at 10:25 A. M. Forceps were at once applied and a dead child weighing nine pounds was delivered. The foetal heart had not been heard for an hour and a half, and the woman had stated that there had been no foetal movements for three days. A post-mortem showed most of the organs normal except the lungs, kidneys and ureters, the lungs being highly oedematous. The upper two-thirds of the left kidney was represented by a sac the size of a peach; the ureter connected with this being six inches long, dilated to the size of a broom-stick and containing a cloudy fluid; the lower third of this kidney contained a small amount of green substance in which the distinction between the cortex and pyramids

could be made out. The pelvis was much enlarged, a separate ureter extending from this to the bladder dilated through most of its course and constricted one inch above the bladder. The right kidney was large and dark red, and the distinctions between the tubular regions were lost. The pelvis and ureter were dilated, the latter to the size of a little finger and filled with fluid. There were six ounces of urine in the bladder.

The second case was that of a multipara twenty-seven years of age, suffering from the beginning with phthisis pulmonalis. In her first labor there was a breach presentation; her second labor was normal. No irregularity of the pelvis could be found by external measurements.

When she entered the hospital at 7 A. M., she had been in labor four hours; dilatation of the os was found to be nearly complete, the bag of the membranes conical and almost filling the vagina. The head was felt to the left in the abdomen. As the pains were vigorous, an attempt was made to bring the vertex into position, but unsuccessfully. The small parts being felt in the vagina, it was decided at 10 A. M. to rupture the membranes and bring down the feet. This was easily accomplished, but the sufferings of the patient were so great that an anaesthetic became necessary. Owing to the prejudice in Massachusetts against the use of chloroform, which almost amounts to a prohibitory law, a small amount of ether was reluctantly given. The delivery was attended with some difficulty, as the arms were extended above the head. Owing to the hemorrhage the placenta was expressed by Crede's method and ergot was given, when the uterus contracted firmly.

Being fearful of the effect of the small amount of ether given, the lungs were carefully examined and no rales found, but within an hour they became oedematous throughout. Atropine gr. 1-60 was given hypodermically, mustard applied externally, and stimulants freely administered, with immediate relief to the symptoms. Once again the tendency to oedema showed itself, when a second hypodermic of atropine relieved the symptoms. On the second day acute pneumonia developed, but she left the hospital in fairly good condition at the end of six weeks.

The third patient was a multipara about twenty-five years old who had had an easy labor two years previously.

It was noticed as she entered the hospital that she had a severe cold, but nothing beyond roughened respiration

could be found on auscultation. Labor progressed easily and favorably until just before the head reached the perineum, when she began to cough and expectorated considerable mucus. In a few moments fine rales could be heard over both lungs. Mustard was applied externally and an hypodermic of morphia sulphate, gr. $\frac{1}{8}$, and atropia sulphate gr. 1-120 given. As the head was now distending the perineum and the pains effective, nothing further was done. After one or two more pains delivery was accomplished, and but for the great number of rales the patient seemed in good condition. Within half an hour the hypodermic was repeated, when there was a marked subsidence of the exudation, but it was only after twenty-four hours and repeated small doses of belladonna that the lungs became again clear. She made an uninterrupted recovery.

The marked and immediate amelioration of the symptoms in all of these cases has led me to feel that we have in atropine a powerful weapon in cases of œdema of the lungs, and my only regret is that I did not use it as freely in the first case as in the others, though I do not believe that under any line of treatment the outcome would have been different. As I have generally used it well guarded with morphine, I have never seen any ill-effects, though it is not a medicine that could be safely intrusted to a novice.—*From N. W. Lancet.*

Cæsarian Section.

BY CHARLES JEWETT, M. D.

HERTSCH (Arch. f. Gyn., B. xxxvii., H. 1). Twenty-two Cæsarian sections have been done at Leipsic according to the Sænger method, with but one death, seven within less than a year. In only three of these cases as far as known did a subsequent pregnancy occur. Two of them were delivered by artificial abortion, one by a second section. The latter patient was first operated June, 1887, and again December, 1888. The second operation was complicated by the fact that the uterus and loops of intestines were adherent to the abdominal wall and that a partial ventral hernia had developed at the site of the abdominal incision, the fundus uteri lying forward between the thighs. The uterine incision was made through the fundus. A chromic catgut suture was encountered which had become firmly encysted, no absorption having taken

place. Silk was used for the deep and juniper catgut for the continuous peritoneal suture. The woman was sterilized in compliance with her own request by ligation of the tubes. The case is the fourth in the literature of Cæsarian section in which the operation with uterine suture was repeated upon the same woman. Chromic acid gut in the Leipsic experience seems to justify what Leopold has claimed for it. The juniper gut appears to satisfy in still greater degree the requirements of a good suture in point of ductility and absorbability. That it may be made perfectly aseptic both their clinical results and bacteriological tests had abundantly proven.

The author thinks adhesion of the uterus to the abdominal wall more likely to occur when silver wire is used for the uterine suture than with absorbable catgut. The former acts as a foreign body and irritates. In experiments upon rabbits the application of iodoform collodion over the line of uterine suture served to prevent adhesion to the abdominal parietes. It had not, however, succeeded clinically. Stitching a fish bladder over the uterine incision was equally unsuccessful. After all, the abdominal adhesion is practically unimportant except on recurrence of pregnancy. The author advises the hypodermic use of ergot just before operating as a prophylactic against inertia uteri after delivery. He calls attention to the importance of carefully examining by percussion for intestinal loops adherent to the line of the old abdominal wound before making a second section.

THE COMPLICATION OF PREGNANCY BY FIBROMATA.

Phillips (*Annals Gyn. and Pæd.*, March, 1890). The following complications are liable to result from fibromata of the gravid uterus, viz.: abortion, local peritonitis with intestinal adhesions and their consequences, obstruction of the pelvis necessitating a Porro or Cæsarian operation, abnormal presentation and death of the foetus, adherent placenta, placenta prævia, insufficient uterine contractions, tardy involution, disintegration of the tumor and peritonitis, torsion of the pedicle and consequent gangrene.

GALVANISM FOR THE INDUCTION OF PREMATURE LABOR AND THE TREATMENT OF CERVICAL STRICTURE.

Bayer (*Trans. German Gyn. Soc., Am. Jour. Obstet.*, April, 1890) comments upon the uses of the constant current in obstetrics. For the induction of labor stable appli-

cations of the electrodes are preferred. This method is more especially applicable where the cervix is but slightly prepared. It acts by loosening the cervical tissues. It is applicable also in spontaneous labor with rigid cervix and in physiological strictures of the neck of the uterus. For provoking contractions labile applications or intermitting currents are required. Twenty to twenty-five milliamperes usually suffice. The cathode is placed in the cervical canal and a large diffusing electrode externally over the abdomen.

METHODS OF CRANIOTOMY.

Donald (Annals Gyn. and Pæd., April, 1890). Despite the fact that craniotomy on the living child is falling into disfavor, there is still a field for that operation. The following are some of the indications: Unsuccessful forceps or version cases in which the head can not be extracted; death of the foetus; such a condition of the mother that Cæsarian section would almost certainly be fatal; certain deformities of the foetus. In the lesser degrees of pelvic deformity the author advises perforation and extraction by the forceps. In the higher degrees of deformity he advocates, first, version and extraction of the body, then perforation through the palatal process, cephalotripsy and extraction with the cephalotribe or by manual traction upon the body and the inferior maxilla combined with suprapubic pressure.—*Brooklyn Medical Journal.*

Microscopy.

X A Contribution to the Etiology of Diphtheria

BY E. KLEIN, M. D., F. R. S.

THE microbe, which was first described by Klebs at the Weisbaden Congress in 1883, then isolated and grown in artificial cultures by Loeffler ("Mitth. aus dem K. Gesundheitsamt," vol. II) from human diphtheritic membrane, was shown by this observer to act virulently on various animals. The Klebs-Loeffler bacillus—by which name the diphtheria microbe is known—is the one with which also Roux and Yersin ("Annales de l'Institut Pasteur," II, No. 12) obtained positive results on guinea-pigs.

In the reports of the Medical Officer of the Local Gov-

ernment Board for 1888-89 and 1889-90, I have shown that there occur in diphtheritic membranes two species of bacilli, very similar in morphological respects, and also in cultures on serum and on agar, but differing from one another in this, that one species (Klebs-Loeffler bacillus No. 1) is not constant in diphtheritic membranes, does not grow on solid gelatine at 19-20° C., and does not act pathogenically on animals; the other species (Klebs-Loeffler bacillus No. 2) is constant in diphtheritic membranes; in fact, is present even in the deeper layers of the membranes in great masses and almost in pure culture, acts very virulently on animals, and grows well on gelatine at 10-20° C. Loeffler, and after him other observers (Flugge, "Die Mikro-organismen," 1886) considered it as a character of the diphtheria bacillus that it does not grow on gelatine below 22° C.; but this character, though true of the Klebs-Loeffler species No. 1, does not appertain to the diphtheria bacillus species No. 2. In fact, there is no difficulty in obtaining pure cultures of this bacillus on gelatine if a particle of diphtheritic membrane be taken and well shaken in two or three successive lots of sterile salt solution, and from the last lot plate cultivations on gelatine are made. In this way I have obtained the diphtheria bacillus in great numbers of colonies and in pure culture. Zarniko ("Centr. f. Bact. u. Parasit," vol. vi, page 154) and Escherich (*Ibid.*, vol. vii, p. 8) both state that the diphtheritic bacillus does grow on gelatine below 22° C.

This bacillus *diphtheriae* acts very virulently on guinea-pigs on subcutaneous inoculation; at the seat of the injection a tumor is produced, which, in its pathology and in microscopic sections, completely resembles the diphtheritic tissue of the human. In human diphtheria, the diphtheria bacillus is present only in diphtheritic membrane, but neither in the blood nor in the diseased viscera; the same holds good for the experimental guinea-pigs. In subcutaneous inoculation with artificial culture, though it causes in these animals acute disease and death—the lungs, intestine and kidney are greatly congested—the diphtheria bacillus remains limited to the seat of inoculation. It was for these reasons that Loeffler concluded that in diphtheria the diphtheritic membrane alone is the seat of the multiplication of the diphtheria bacillus, and that here a chemical poison is produced, which, absorbed into the system, causes the general diseased condition, and eventually death. Roux and

Yersin have then separated from artificial broth cultures the bacilli and the chemical products, and, by the injection of these latter alone into guinea-pigs, have produced a general effect. I have, in this year's report to the Medical Officer of the Local Government Board (1889-90), shown that, in these experiments of injection of cultures into guinea-pigs, an active multiplication of the diphtheria bacilli at the seat of inoculation can be demonstrated by culture experiments; from the local diphtheritic tumor and the nearest lymph-glands the diphtheria bacilli can be obtained in pure culture on gelatine.

On various occasions during the last three years information has reached me by Health Officers (Dr. Downes, Mr. Shirley Murphy, Dr. Thursfield) as to a curious relation existing between a mysterious cat disease and human diphtheria in this manner: that a cat or cats were taken ill with a pulmonary disease, and, while ill, were nursed by children, and then these latter sickened with well-marked diphtheria. Or children were taken ill with diphtheria, and either at the same time or afterwards the cat or cats sickened. The disease in the cat was described as an acute lung trouble: the animal was quiet, did not feed, and seemed not to be able to swallow. In some cases they recovered; in others they became emaciated, while the lung trouble increased, and ultimately they died. In one instance—in the north of London, in the spring of 1889—this cat malady, occurring in a house where diphtheria soon afterward appeared amongst the children, was of a widespread nature. A veterinary surgeon—Dr. Daniel—informe me that, at that time, he had several patients among the cats affected with the disease, consisting in an acute catarrhal affection, chiefly of the respiratory passages. He furnished me with two such animals: one that, after an illness of several weeks, had died, another that was sent to me in a highly emaciated state, affected with broncho-pneumonia; this animal was paralyzed in the hind limbs. In both instances the post-mortem examination showed severe lung disease, broncho-pneumonia, and large white kidneys, due to fatty degeneration of the entire cortex. A similar condition is met with in the human subject in diphtheria. Further, I received from Dr. Thursfield, of Shrewsbury, the body of a cat that had died after a few days' illness from pneumonia, in a house in which children were ill with diphtheria; another cat in the same house, that became next ill with the

same lung trouble, also succumbed. The post-mortem examination of the animal that I received showed severe broncho-pneumonia and large white kidneys, the entire cortex being in a state of fatty degeneration.

Subcutaneous inoculations of cats were carried out with particles of fresh human diphtheritic membranes and with cultures of the diphtheria bacillus (report of Medical Officer of the Local Government Board, 1889-90); thereby a local diphtheritic tumor was produced at the seat of inoculation, and a general visceral disease; in the cases in which death followed after a few days the lungs were found much congested; when death followed after one or more weeks, the lungs showed broncho-pneumonia, and the kidneys were enlarged and white, the cortex being in a state of fatty degeneration; if the disease in the animals lasted beyond five to seven days both kidneys were found uniformly white in the cortex; if of shorter duration, the fatty degeneration was sometimes only in patches. Although in these experiments the bacillus *diphtheriae* was recoverable by cultivation from the diphtheritic tumor at the seat of inoculation, there were no bacilli found in the lung, heart's blood, or kidney, and the conclusion is justified that, just as in the human diphtheria and in the diphtheria produced by subcutaneous inoculation in the guinea-pig, so also in these experimental cats the visceral disease must be a result of the action of a chemical poison produced by the diphtheria bacillus at the seat of inoculation.

During the last ten or twelve years certain epidemics of diphtheria have occurred which were traced to milk, but the manner in which that milk had become contaminated with the diphtheritic virus could not be demonstrated, although the evidence as to the milk not having been polluted from a human diphtheria case was very strong. The epidemic of diphtheria that prevailed in the north of London in 1878, investigated by Mr. Power for the Local Government Board; then the epidemic that occurred in October, 1886, at York Town and Camberley; the epidemic in Enfield at the beginning of 1888, and in Barking toward the autumn of 1888, were epidemics of this character. Mr. Power, in his report to the Local Government Board on the York Town and Camberley outbreak, states (page 13) that a veterinary surgeon has certified that the cows from which the infected milk was derived were all in good health, but that two of the cows showed "chaps" on their teats, and he adds that

even two or three weeks after the epidemic had come to an end—the use of milk having been in the meantime discontinued—he saw at the farm one cow which had suffered chapped teats.

Two milch cows were inoculated with a broth culture of the diphtheria bacillus derived from human diphtheria. In each case a Pravaz syringe ful was injected into the subcutaneous and muscular tissue of the left shoulder. On the second and third days there was already noticed a soft but tender swelling in the muscle and the subcutaneous tissue of the left shoulder; this swelling increased from day to day, and reached its maximum about the end of the week; then it gradually became smaller but firm. The temperature of both animals was raised on the second and third day, on which days they left off feeding, but after this became apparently normal. Both animals exhibited a slight cough, beginning with the eighth to tenth day, and this gradually increased. One animal left off feeding and ruminating on the twelfth day, "fell in" considerably, and died in the night from the fourteenth to fifteenth day; the other animal, on the twenty-third to twenty-fourth, left off feeding, "fell in" very much, and was very sick; it was killed on the twenty-fifth day.

In both the animals, beginning with the fifth day, there appeared upon the skin of the udder, less on the teats, red raised papules, which in a day changed into vesicles, surrounded by a rim of injected skin. The contents of the vesicles was a clear lymph, the skin underneath was much indurated and felt like a nodule; next day the contents of the vesicle had become purulent, *i. e.*, the vesicle had changed into a pustule; in another day the pustule dried into a brownish-black crust, with a sore underneath; this crust became thicker and larger for a couple of days, then became loose, and soon fell off, a dry, healing sore remaining underneath. The whole period of the eruption of papules, leading to vesicles, then to pustules, and then to black crusts which, when falling off, left a healing dry sore behind, occupied from five to seven days. The eruption did not appear in one crop; new papules and vesicles came up on the udder of one cow almost daily between the fifth and eleventh day after inoculation, in the other cow between the sixth and tenth day; the total number of vesicles in the former cow amounted to about twenty-four on the udder, four on the teats; in the latter they were all on the udder,

and amounted to eight in all. The size of the vesicles and pustules differed; some were not more than one-eighth of an inch, others larger, up to one-half and three-quarters of an inch in diameter; they had all a rounded outline, some showed a dark center. From one of the above cows, on the fifth day, milk was received from a healthy teat, having previously thoroughly disinfected the outside of the teat and the milker's hand. From this milk cultivations were made, and it was found that thirty-two colonies of the bacteria bacillus without any contamination were obtained from one cubic centimeter of the milk.

Unlike in the human, in the guinea-pig and in the cat, the diphtheria bacillus passed from the seat of inoculation into the system of the cow; this was proved by the demonstration of the diphtheria bacillus in the milk. But also in the eruption on the udder, the presence of the diphtheria bacillus was demonstrated by microscopic specimens, and particularly by experiment. With matter taken from the eruptions—vesicles and pustules—of the udder, two calves were inoculated into the skin of the groin; here the same eruption made its appearance: red papules, rapidly becoming vesicular, then pustular; and then became covered with brown-black crusts, which, two or three days after, became loose, and left a dry, healing sore behind. More than that, the calves that showed this eruption after inoculation became affected with severe broncho-pneumonia and with fatty degeneration of the cortex of the kidney. In the two cows above mentioned, on post-mortem examination, both lungs were found highly congested, oedematous, some lobules almost solid with broncho-pneumonia in the upper lobes and the upper portion of the middle or lower lobe respectively; the plural lymphatics were filled with serum and blood. Hemorrhages in the pericardium and lymph-glands, and necrotic patches were present in the liver. At the seat of inoculation there was, in both cases, a firm tumor consisting, in necrotic diphtheritic change, of the muscular and subcutaneous tissue. In this diphtheritic tumor continuous masses of the diphtheria bacillus were present; their gradual growth into, and destruction of, the muscular fibers could be traced very clearly.

It appears, then, from these observations, that a definite disease can be produced in the cow by the diphtheria bacillus, consisting of a diphtheritic tumor at the seat of inoculation, with copious multiplication of the diphtheria bacillus,

a severe pneumonia, and necrotic change in the liver; the contagious nature of the vesicular eruption on the udder and excretion of the diphtheria bacillus in the milk prove that in the cow the bacillus is absorbed as such into the system.—*Times and Register.* X

San Francisco Microscopical Society.

Reported for the MEDICAL NEWS.

THE regular meeting of the San Francisco Microscopical Society was held at its rooms, July 9, 1890, with President Wickson in the chair.

President Wickson exhibited leaves of the cultivated blackberry afflicted with a red rust, a fungus growth—*Uredo cœoma nitens*. These leaves were sent Mr. Wickson by C. S. Upham, Moore's Station, Butte County, and the exhibitor took occasion to remark that this fungus was common on the wild blackberry leaf and on other plants, but so far as he was aware had not been previously noted on the cultivated varieties. This particular species of fungus in its general characteristics and mode of growth is quite like the rust of wheat, or the rust on the rose leaf. Hybrid perpetual roses are especially susceptible to its attacks. The Government experts in mycology have recommended spraying roses or other bushes thus infected with a very weak solution of ammoniated sulphate of copper—a solution of common blue-stone with a little washing ammonia added. Six cents worth of ammonia and sulphate of copper makes twenty-two gallons of solution of sufficient strength to destroy the fungus, and it has been noted that the sulphate of copper is of no avail unless the ammonia is also added.

Dr. Eisen mentioned, during the discussion, the vine disease of Southern California, and the frightful destruction it had wrought. This disease has been studied by N. B. Pierce, sent out from Washington by the Department of Agriculture, and he has arrived at the conclusion that it is caused by the presence of bacteria. In the course of his demonstrations, Mr. Pierce had carried some of the sap of diseased vines to Washington and inoculated healthy vines with the same. In a short time all the symptoms and conditions of the disease were noted in these vines, and the bacteria were found in large numbers in the cells. Dr. Eisen and Dr. Mouser were inclined to discredit Mr. Pierce's

theory, and were of the opinion that further investigation would demonstrate that other causes than bacteria were responsible for the ravages of the disease. The juice of grapes grown on vines thus infected is very bitter and unpleasant to the taste, so there is little likelihood of the same entering into human food. A further peculiarity of this vine disease is that apricot and fig trees grown near an infected vineyard also show symptoms of the disorder.

Mr. Riedy exhibited a diatom slide prepared by Thum, of Leipzig, containing three hundred different species of diatoms, arranged in lines and squares and accompanied by a manuscript catalogue giving the specific and generic name of each. The diatoms were arranged after the system in Dr. H. Van Heurck's *Synopsis des Diatomées de Belgique*; and when it is considered that the three hundred forms on the slide occupied a space only four milimetres square, and each individual frustule was correctly placed as to its position in the lines and squares, the amount of patient and skillful manipulation necessary to this arrangement is simply a marvel of human ingenuity. Mr. Riedy also exhibited two other slides with a less number of forms.

R. H. Freund exhibited a slide of micrococci which revealed a large number of forms.

WILLIAM E. LOY,
Recording Secretary.

LATENT LIFE—A NEW BIOLOGICAL DISCOVERY.—Prof. Ranvier, in connection with the description of the method of microscopical study described by him in this issue of the JOURNAL gives the following discovery in general biology made by him with the aid of his new technique: "It is a well-known fact," says he, "that the tissues of the mammals, twenty-four hours after death—that is to say, after the abolition of respiration, circulation and innervation—no longer present physiological reactions. It is a fact, nevertheless, that anatomical elements removed from the animal prior to this extinction and preserved under certain conditions retain life at the end of forty-eight hours. I was able to demonstrate the truth of this paradoxical proposition by the following experiment. From a rabbit which I was about to decapitate for another purpose, I removed by the aid of a pipette, thoroughly sterilized by heat, a drop of peritoneal lymph which I placed on a moist-chamber slide likewise previously sterilized. I closed the preparation with melted

paraffin and put the slip in my laboratory, when the temperature was between 50° and 60° F. At the end of forty-eight hours, having placed the preparation in the warm bath (as described elsewhere), I saw a great number of the lymph cells still putting forth amoeboid prolongations, by means of which they moved from point to point. Before raising the temperature these cells were spherical and immobile. They were therefore then in a state of latent life, a sort of hibernation from which heat alone was necessary to evoke them.

—*St. Louis Medical and Surgical Journal.*

Gleanings.

HEMORRHOIDS.—Dr. Emory Lanphear, of Kansas City, Surgeon in Charge, East Side Dispensary, offers some suggestions on the "Treatment of Piles" which are worth reproducing.

If the subject does not wish a cure attempted, he should be directed to carefully wash with very hot water the tumor which protrudes beyond the external sphincter, and then apply an ointment for which the subjoined is an excellent formula :

R _y Acidi tannici,	gr. v.
Cocainæ hydrochloratis,	gr. ii.
Petrolati,	ʒ iii.

Misce bene et ft. ungt. Sig.: Apply as directed.

This is to be rubbed upon the tumor, and then an interval of about fifteen minutes allowed to elapse, when another application is to be made; ten minutes afterward the patient is to make an effort (and considerable force can be exerted) to force the protruding mass back into the bowel. If this prove unsuccessful, the ointment can be used every two or three hours for twenty-four hours, and then another attempt made. And so on.

If preferred the following ointment may be prescribed :

R _y Pulv. gallæ,	ʒ i.
Extract opii,	gr. viii.
Unguenti plumbi subacetat	
Petrolati,	aa ʒ i.

Misce et. ft. unguentum. Sig.: Ointment for piles. This to be used in the manner above directed.

After the pile has been returned to the rectum, it is well to give a suppository, and for this purpose iodiform is

highly lauded ; it certainly, by its powerful odor, conveys to the patient's mind the idea that *something is being done*. A good combination is :

R	Iodoform,	.	.	.	.	.	.	3 i.
	Balsam peruv.	.	.	.	.	.	.	3 ii.
	Magnesii calcin,	.	.	.	.	.	.	3 ii.
	Olei theobromæ							
	Cerae albæ,	.	.	.	.	.	.	aa 3 iss.

Misce et fiant suppositor. No. xii. Sig.: Once or twice daily.

Then the bowels are to be kept relaxed by means of appropriate remedies, as the belladonna, nux vomica and aloin pill, stillingia and senna or Epsom salt combined with sulphuric acid ; the latter mixture being especially indicated when there is hemorrhage. Stimulants, indigestible food, and over-eating are to be carefully avoided, animal food being especially objectionable during an acute attack. Fluid extract of hamemalis alone, or in combination with hydrastis, may be given in doses of ten drops or more thrice daily. I have, I believe, had excellent results from a capsule containing three grains of Burgundy pitch and one-sixteenth grain of resina podophylli, given after each meal.

As an injection he prefers the following :

R	Acidi carbolici,	.	.	.	.	.	5 p.
	Ext. ergotæ fl.,	.	.	.	.	.	f. 3ii.

M. Sig.: Ten to fifteen drops to be injected at each sitting.

The paper concludes as follows :

1. An inflamed pile must never be touched.
2. Not more than two small (or one large) tumors should be injected at one sitting.
3. If the tumor be situated high up the rectal wall, it may be pulled down with a tenaculum, but after injection it must be quickly pushed back to prevent strangulation.
4. It is best to lock up the bowels for a few days in order to prevent the solidified tumor from coming down.
5. The injections should not be repeated sooner than two or three weeks ; from two to four months being necessary to effect a complete cure where many piles are present.
6. External piles, or cutaneous tags, must never be injected ; they are best treated by snipping off with scissors, first being injected with cocaine.
7. Persistent diarrhoea following injection, indicates a

slough or rectal ulcer, and demands examination by the speculum.

8. Proper attention must be paid to the condition of the bowels, the liver and the general health for several months, or the rectal trouble is liable to recur.—*Kansas Med. Catalogue.*

A NEW ANTISEPTIC.—Pyotkannin is a new antiseptic introduced by Merck, and which he claims to be “*an absolutely sure and yet perfectly safe bactericide.*” Prof. Dr. J. Stilling, its discoverer, claims it has cured

Pyoid Corneal ulcers	{	in one day.
Hypopyon Keratitis		
Marginal Eye Ulcers		
Parenchymatous Keratitis	{	in a week or two.
Serous Iritis		
Panaritium		in two days.
Varicose Ulcers		in three days.
Burns, Purulent Sores and Lacerations of various kinds,	{	in astoundingly brief periods.
Also Epizootic Eczema of		
Horses and Cattle, etc.		

HOW TO USE SULPHONAL.—J. Madison Taylor, in the *Univ. Med. Magazine*, protests against the growing distrust of sulphonal, believing that when judiciously used it shows rare and admirable qualities. But he thinks it has been improperly administered, and gives his opinions based upon extensive use. He gives from five to seven grains, rarely more than ten grains, beginning in the afternoon, repeating about every three hours. Three or four doses will usually be followed by excellent results in securing a normal night's sleep. It seems best administered in a little soup or milk. In those who are wakeful toward morning it is best to give the drug toward bedtime to secure its tardy effect. Thus used sulphonal gives excellent results, and seems free from danger or unpleasant results.—*Ind. Med. Jour.*

HINTS TO THE UNFORTUNATE.—A few suggestions culled from accounts in the daily press, of cases of “accidental death” during the past week, may prove of service to those who are not ingenious enough to think of them for themselves: (1) Mix some coarse flour and strychnine to kill the rats with, then place the mixture in a jar, similar and as

near as possible to that containing the family oatmeal. Prepare to shed this mortal coil! (2) Place some laudanum in an empty medicine bottle, and stand it alongside a bottle of physic on a table by your bedside; take a dose, from the nearest bottle, in the dark; ten chances to one it's the laudanum. (3) Pour some carbolic acid into a beer-bottle, cork it, and put it aside in a cool spot; the next person who comes along with "a mouth on him," will find it a vast improvement on common or ginger beer. (4) Smear a piece of bread with phosphorus paste (rough on rats) and leave it in a cupboard well within reach of marauding youngsters; if their lives are insured, you will have no reason to regret the experiment.—*Hospital Gazette*.

TREATMENT OF FISSURED NIPPLE (Eloy).—

- (a) *Preventive Treatment*: 1. Extreme cleanliness—after each nursing we should carefully wash the parts.
 2. Apply a three per cent. lotion of boric acid.
 3. If the areola is sensitive, use the following pomade:

R.—Carbonate of zinc	gr. lxxv.
Glycerine	ʒj
Vaseline	ʒvj, gr. xv.

Or, also, the following:

R.—Tannin	ʒj, gr. xlvi.
Glycerine	ʒ xijss.
Rose Water	ʒv.

- (b) *Curative Treatment*: 1. Cauterization of the fissure with nitrate of silver stick.

2. Immediately afterwards use the following:

R.—Collodium	ʒv.
Ether	gr. xlvi.
Hydrochlorate of cocaine	gr. $\frac{3}{10}$.

Or:

R.—Salol	gr. xxx.
Ether	gr. lx.
Hydrochlorate of cocaine	gr. ij. $\frac{1}{4}$.
Collodium	ʒvj. gr. xv.

—*La Bulletin Medicale*.

REMARKABLE FECUNDITY.—I was called to see Mrs. E. T. Page January 10th, 1890, about 4 o'clock A.M.; found her in labor and at full time, although she assured me that her "time" was six weeks ahead. At 8 o'clock A.M., delivered her of a girl baby; I found there were triplets, and so informed her. At 11 A.M., I delivered her of the second girl. After having rectified presentation which was singular, face, hands and feet, all presented, I placed in proper position, and practiced "version." This child was "still-born," and after considerable effort by artificial respiration it breathed and came around "all right." The third girl was born at 11:40 A.M. This was the smallest one of the four. In attempting to take away placenta, to my astonishment I found the feet of another child. At 1 P.M., this one was born; the head of this child got firmly impacted at lower strait, and it was with a great deal of difficulty and much patient effort that it was finally disengaged; it was blocked by a mass of placenta and cords. The first child had its own placenta; the second and third had their placenta; the fourth had also a placenta. They weighed at birth in the aggregate nineteen and a half pounds without clothing; first weighed six pounds; second, five pounds; third, four and a half pounds; fourth, four pounds. In the country, and "backwoods" at that, it was impossible to procure a "wet nurse," so with the little help we could control, and feeding the babies on "Reed & Carnick's Infant Food," they thrived well. From using all the foods on the market I long since found that the above food possessed some qualities that I failed to find in the others. Mrs. Page is a blonde, about thirty-six years old, has given birth to fourteen children, twins three times before this; one pair by her first husband. She has been married to Page three years, and has had eight children in that time. I have waited on her each time.

They are in St. Joseph, Mo., now, having contracted with Mr. Uffner, of New York, to travel and exhibit themselves in Denver, St. Joseph, Omaha and Nebraska City, then on to Boston, Mass., where they will spend the summer.

The birth of quadruplets is not so remarkable, but that they should live and thrive as these have done, is. In about 375,000 births there are quadruplets, and it is a remarkable fact that they always die. Will some of my brother M.D.'s give us their experience with quadruplets?

J. DELEON, M.D., Ingersoll, Texas.

—*The Railway Journal.*

ROUND PERFORATING ULCER OF THE DUODENUM.—Dr. W. W. Johnston, in an article on Round Perforating Ulcer of the Duodenum, in the *American Journal of the Med. Sciences*, gives the following points in the differential diagnosis between gastric ulcer and duodenal ulcer.

GASTRIC ULCER.

1. Most common in women from twenty to thirty years of age.
2. Pain in epigastrium soon after eating.
3. Pain relieved by vomiting.
4. Vomiting of mucus, bile and food—gastric indigestion.
5. Hæmatemesis common.
6. Hemorrhage from intestines rare.

DUODENAL ULCER.

1. Most common in men from thirty to forty years of age.
2. Pain in right hypochondrium two to four hours after eating.
3. Pain not relieved by vomiting.
4. Vomiting rare; no gastric indigestion.
5. Hæmatemesis rare.
6. Hemorrhage from intestines common.

One would be justified, he says, in making a diagnosis of duodenal ulcer if a man, otherwise in good health, between thirty and forty years of age, suffers with attacks of severe pain below the edge of the liver to the right of the median line, the pain coming on from two to four hours after eating, lasting from one to four hours, and gradually lessening, to recur after the next meal, being most prolonged and more severe at night. Such a symptom, without gastric indigestion or the evidence of any organic lesion, pursuing a chronic course during a year or more, with remissions and exacerbations, being benefited by liquid diet and aggravated by indiscretions in diet, could reasonably be attributed to duodenal ulcer as a cause. This diagnosis would be confirmed by the occurrence of intestinal hemorrhage or by the sudden development of perforative peritonitis.

TREATMENT OF ITCH.—The method practiced by Prof. Ed. de Smet at l'Hôpital St. Pierre, of Brussels, is claimed by that gentleman to be short and efficacious (*Journal des Maladies Cutanées et Syphilitiques*). It may be briefly stated as follows: 1°. The preparatory treatment consists in taking a hot alkaline bath in which the patient remains for a half-hour, rubbing the affected parts in the meantime. Subcarbonate of potassa in water in the strength of 1 to 800 is the best. 2°. The following liquid is energetically applied with a brush, the patient standing before a fire:

R _y	Calc. viv	.	.	.	.	.	.	I
Sulfur	.	.	.	.	.	.	.	2½
Aquæ	.	.	.	.	.	.	.	IO

M.

About a quart of this mixture should be used at one treatment, lasting from 20 to 30 minutes. 3°. An emollient or feebly alkaline bath is taken, lasting a half-hour. If necessary, starch flour may be subsequently applied. While these different operations are going on, the clothing is subjected to a high heat in order to destroy the parasites completely. The whole treatment lasts one hour and a half, and the patient is said to be cured.—*St. Louis Med. and Surg. Jour.*

REMOVAL OF A RIFLE BULLET FROM THE CHEST.—We learn from a late issue of the *Lancet* that Dr. C. R. MacDonald recently removed a rifle bullet from a man which had been in the chest for thirteen years. The case is chiefly remarkable from the fact that the bullet had remained in the pleural cavity for so long a time without setting up pleurisy. It entered the back of the shoulder immediately below the spine of the scapula, and probably entered the pleural cavity by penetrating the intercostal muscles. The operation was performed with antiseptic precautions, and the wound soon healed. A splinter had been removed from the wound of entrance some months after the accident, which occurred to the man while marking at a rifle range in Beith. The bullet had gravitated to the lower part of the chest.

THE EARLY RECOGNITION OF CANCER OF THE CERVIX UTERI.—Impressed by the frequent complaints of patients in the New York Cancer Hospital that their attending phy-

sicians never told them that anything serious was the matter until their condition had become hopeless, and convinced that general practitioners need to be taught that the successful treatment of uterine cancer depends on *their* early recognition of its presence, Dr. Coe gives in the *Medical News*, February 16th, 1889, the result of his observations upon this subject, attempting to combat certain fallacies which are generally accepted and to point out certain reliable points in the early diagnosis of the disease. Over one-fifth of the recorded cases occur in patients under forty years of age. The disease may reach an advanced stage without producing cachexia. Many, in fact most, of the patients at the hospital, have been singularly free from pain, which, when it does occur, is a later symptom due to peritonitis. Profuse foul watery discharge is not always present, even when there is extensive ulceration. Slight, irregular hemorrhages, occurring *after coitus* or in the intermenstrual period, should arrest attention, as they frequently result from incipient cancer. Premature climacteric hemorrhages (between thirty-five and forty) are usually pathological. In all cases in which a patient over forty years of age seeks advice with symptoms (specially hemorrhage) referable to the pelvis, a careful examination should be made. The pain attending incipient epithelioma may be sharp, or merely a dull backache, or a neuralgia of adjacent nerve trunks, as the sciatic. Hypertrophy and general induration of the cervix, accompanying an erosion which bleeds easily when touched, should lead the physician to excise a generous wedge of the suspected tissue, including both the mucous membrane and the subjacent muscular tissue, and to submit this to microscopic examination. Excision of the cervix should be performed in every case of extensive erosion with general induration, whether cancer has actually developed or not.

Book Notices

DISEASES OF THE RECTUM AND ANUS: THEIR PATHOLOGY, DIAGNOSIS AND TREATMENT. By Chas. B. Kelsey, A. B., M.D., Professor of Diseases of the Rectum at the New York Post-Graduate Medical School and Hospital; Late Professor of Diseases of the Rectum at the

University of Vermont, etc. Third Edition. Rewritten and Enlarged. With two chromo-lithographs and one hundred and sixty-eight illustrations. 8vo. Pp. 483. Cloth. New York: William Wood & Co., 1890.

If the organs of the body were divided into those of honor and dishonor, like St. Paul divides household vessels, we presume that the rectum and anus would be classed as *organs of dishonor*; but, though their offices be filthy, yet they are of the most essential character; and the diseases of no other organs entail more misery and unhappiness than do their affections. The king and queen occupying thrones, and the minister of state, as well as the peasant of the field, are liable to have hemorrhoids, fistula in ano, prolapsus recti, etc., and suffer all the pains attending such pathological conditions—their lives rendered wretched, and may be a fatal termination resulting. Consequently, even though the anus and rectum be regarded as *organs of dishonor*, yet their diseases are most important, and there are none that it is more necessary the general practitioner should understand and be able to scientifically treat.

Some physicians are disposed to relegate the diseases of the anus and rectum to specialists; but this is wrong. Cases of them are very numerous, and the general practitioner should qualify himself to treat them. Their proper treatment, of course, needs some special study, but there is no class of diseases that do not.

The work of Dr. Kelsey has entered upon its third edition, which is strong evidence that it possesses very considerable merits. In preparing a third edition the work has been greatly improved. Some of the chapters have been entirely rewritten, and much new matter has been added. The chapters on the treatment of stricture, both benign and malignant, and on the formation and closure of artificial anus, have been recast.

The author states in the preface that he has prepared the work for the general practitioner; and we think that an examination will show that by means of numerous illustrations, and by clear and definite descriptions, the family physician will find the volume a safe guide for the performance of all the operations called for in the diseases of the anus and rectum.

The first three chapters are devoted to the consideration of the practical points in anatomy and physiology, general

rules regarding examinations, diagnosis and operation; congenital malformations. In chapters which follow are treated: Abscess, fistula, hemorrhoids, prolapse, malignant and non-malignant affections, etc.

FAMILIAR FORMS OF NERVOUS DISEASE. By M. Allen Starr, M.D., Ph.D., Professor of Diseases of the Mind and Nervous Diseases, College of Physicians and Surgeons, New York. With Illustrations, Diagrams and Charts. 8vo. Pp. 339. Cloth. New York: William Wood & Co. 1890.

Advances in knowledge in the department of neurology, says the author, have been of late more rapid than in any other branch of medicine. The result has been to render diagnosis in many affections, previously obscure, both more precise and less difficult; and to open to successful surgical treatment many diseases formerly considered fatal.

The object of the work on our table is to make available to the general practitioner some of the results of later investigations which have a direct and practical bearing upon the commoner forms of nervous disease. The facts which have been chiefly emphasized, as is stated, are those which enable one to make an accurate diagnosis of the nature and of the location of lesions in the central nervous system; for it is evident that such diagnosis is the essential preliminary both to medical and surgical treatment.

As stated in the preface, the work is not a treatise upon nervous diseases. It is a series of clinical studies of the more familiar types. Chapter I. treats of the Localization of Cerebral Functions, giving a history of the development of the doctrine of cerebral localization and setting forth the proofs derived from anatomy, embryology, pathology, experimental atrophy, etc. In Chapters II. and III. there are described the Functions of the Cerebral Cortex, and an account given of the Motor Area and its Affections.

The work is a truly philosophical work upon the brain and nervous system, yet in all respects a medical work. It describes the results of disease and of various lesions at different localities of the nervous system. For instance, when the base of the brain is affected it will be manifested by certain nervous phenomena which will direct the attention of the physician to that point.

Among the recognized diseases treated are the different

forms of aphasia, locomotor ataxia, with remarks on the treatment by suspension, paralysis of infancy, paralysis agitans, chorea, epilepsy, etc. All physicians interested in diseases of the brain and nervous system, and in the phenomena presented by such affections, will study this work with great interest. Neurologists are constantly making additions to our knowledge of the nervous system, and it is of a character that is important and valuable, increasing, as it does, what is already known in regard to the mind, the study of which has always been attended with great obscurity.

RAILWAY SURGERY. A Practical Work on the Special Department of Railway Surgery: For Rai'way Surgeons, and Practitioners in the General Practice of Surgery. By C. B. Stemen, A.M., M.D., LL.D., Professor of Surgery in the Fort Wayne College of Medicine; Surgeon to the St. Joseph's Hospital, etc. With Numerous Illustrations. 8vo. Pp. 315. St. Louis: J. H. Chambers & Co. Price, \$3.

The author states that this work is the result of his experience in the practice of accidental or railway surgery, and his strong belief that a treatise on this special department was greatly demanded.

There has been an effort in progress for several years to make a specialty of railway surgery; and for the furtherance of it a number of associations of Railway Surgeons has been organized. The first one started was organized at Decatur, Ill., January 25, 1882, Dr. J. T. Wood, of Toledo, O., being elected president. June 28, 1888, there was formed the National Association of Railway Surgeons in the city of Chicago. In the last year or two there has been established a journal called the *Journal of the National Association of Railway Surgeons*.

It seems to us that there is no need of making what is termed Railway Surgery a specialty. There may be some peculiar features in railway accidents, as there are peculiar features in every class of accidents, yet they do not differ from accidents in general to a degree to prevent them from being noticed or treated at sufficient length in any of the text-books upon surgery. The military surgeon meets with a great variety of accidents—traumatic injuries—as gunshot wounds, punctured wounds, fractures produced by balls, splintering the bones, etc., yet he qualifies himself for his

position by study of the same works upon surgery as the civil surgeon uses to qualify himself for the practice which he expects to meet. At the outbreak of our civil war Prof. Gross and a few other surgeons—themselves civil surgeons—prepared some hand-books for the use of the many young regimental surgeons who went into the army, but those works have long been out of print.

We must give the work on our table the credit of containing a good deal of interesting, practical information, that will be found useful not only by those gentlemen who claim to be railway surgeons, but by surgeons generally. Dr. Stemen has had a large experience as a surgeon, and, being an intelligent man, he has recorded not a few valuable facts. But since he has aspired to be an author—has been ambitious to write a book—we think it would have been better to have given it the title of "Personal Experience in Surgery," and not "Railway Surgery."

In the chapter on "Shock in Railway Injury" are recorded some interesting facts, some of which are illustrated by reports of cases. On page twenty-three we find the following remarks: "Railway injuries are attended with greater fatality than are the wounds received in any other way. Surgeons generally concede that the cause of the unusual mortality following injuries of this character is from the fact that in a majority of cases the shock, in intensity, is out of all proportion to the extent of the injury sustained. This condition is frequently the result of the great mental excitement or fright incident to accident, and therefore the mental condition of the patient should be carefully considered by the railway surgeon."

A case is recorded of a young man of excellent health who, falling in front of an engine, had one of his legs crushed. He suffered no other injury, yet he died in the course of three hours. Shortly after this occurrence the doctor was summoned to see an old man, aged seventy-two years, who, while in an oblivious state of intoxication, had been run down by an engine, and received a wound to all appearances as serious as the one occurring in the case previously mentioned. In the latter case there was no evidence of shock, and the patient was so thoroughly under the influence of liquor that the leg was amputated in twenty minutes after the infliction of the wound, without the administering of any other anaesthetic. The patient made a rapid and perfect recovery.

Translations

Translations from Our Foreign Exchanges.

Translated for MEDICAL NEWS, from the French, by Dr. Illoway,
Cincinnati, Ohio.

X CRANIECTOMY IN A CASE OF MICROCEPHALUS.

BY DR. LANNELONGUE.

THE operation I have the pleasure of reporting was made May 9th, and has been attended with excellent results.

The case was that of a little girl aged four years presenting the cranial deformities and the symptoms of microcephalus in its grave form. She was born at term without accident; her father is thirty-eight and her mother thirty-five years old, and both are free from physical defects and enjoy most excellent health; there is thus no hereditary influence.

She has five brothers or sisters, all in good health. She has always been more backward than the other children. Up to three years of age she could not walk. Since several weeks she is taught to say a few syllables, always the same. The saliva flows from her mouth as from a new-born infant. Lastly, small, puny, she presents the appearance of a two-year old child imperfectly developed. Her body is thin, her waist not measuring more than Om 77; the circumference of the thorax, taken at the level of the nipples, is only Om 45. Placed in a longitudinal position, she falls immediately and with all her weight as soon as she is not supported; her movements, if an attempt is made to have her walk, are disordered. I must add, she is constantly giving forth inarticulate cries, and she is indifferent to the playthings as well as to the caresses bestowed upon her. There are no contractures, no epileptic trembling, and the general sensibility is normal. As to the head, it is very small, deformed; the cranium is narrow, very much flattened transversely, prominent at the vertex, presenting the Scaphoidian type; the face is prognathous, the forehead retreating and narrow. In short, I found myself confronted by a type of microcephalus with idiocy.

I should not, however, have dreamed of surgical interference if I had not previously made, in the service of Professor Legrony, an autopsy of a young subject presenting a similar case, with thick cranium, with tightly closed sutures and covered with irregular hyperostoses, and if, of the three theories emitted concerning microcephalus, I had not preferably admitted that which recognized a cranial and a cerebral lesion. Under these conditions, believing from the dimensions of the cranium that the cerebrum lacked space for development, I thought of modifying the compromised or retarded cerebral evolution, and giving it an opportunity for better development by diminishing the resistance of the cranium, principally in the region of the cerebrum, where the centers that exercise the greatest influence on the life of relation, are found. The significant results obtained up to now justify the above expressed view, as also the operation which I undertook, and which was performed by opening the cranium over a point of special selection, along the line of the sagittal suture, with a possibility of prolonging the cranial opening. About a finger's length from the median line I made a long and narrow incision parallel to the sagittal suture, extending from the frontal to the occipital suture, so as to obtain on the left side of the cranium, which side was markedly more depressed than the right, a loss of substance Om .09 long and Om .006 broad; that is to say, the removal of a tongue of bone of these dimensions.

The operation has succeeded perfectly; the dura-mater was not involved; the superficial wound was immediately reunited and healed by first intention. Since the operation a notable amelioration has been produced; the child has become calm, the phenomena of cerebral excitation have disappeared; a steady and progressive development of the intelligence has been observed; it plays; it laughs; it understands what is said to it; she attempts to speak, and even pronounces some words; she can stand erect, and has commenced to make some steps unsupported; she does not slobber any more; she can eat at the table. On the other hand, the local state is perfect; the cicatrix is mobile, non-adherent, and on its outside there can be felt a depression, rather deep and straight, corresponding to the loss of bony substance of the cranium.

En resume, whatever may be the happy influences exercised by the operation, it is certain that a part of this ameli-

oration must be attributed to the education of the child; this, however, is the second part of the operation and its completement.

M. Verneuil. I must add that a second operation in all respects similar to the one above reported, was made by Dr. Lannelongue about eight days ago. The resection of the cranium in this second case, was still more extensive; occupying the whole length of the antero-posterior diameter. The child has done very well; marvellously, indeed, so far as the operation is concerned; as to the other results it is still too recent for anything to be said as yet, but it seems that they will be as happy as in the first case.—*La Tribune Medic.*



Editorial.

CHOLERA.—Cablegrams announce the appearance of cholera in the Spanish Province of Badajoz, on the Portuguese frontier. A rigorous cordon has been established on the frontier by the Portuguese authorities.

It is also announced from Cairo, Egypt, that cholera has made its appearance at Mecca. The number of Turkish pilgrims to the shrine of Mecca this year is estimated at three hundred thousand.

A strict quarantine will no doubt keep the disease out of the United States.

The development of the fact by the medical profession that such plagues as cholera are propagated by the entrance into the system by the germs which originate them has saved many thousands of lives, and has robbed these scourges of their terrors.

WOMAN'S STATE HOSPITAL MEDICAL COLLEGE.—A female medical college, styled as above, will open this fall in Cincinnati. The college that has been in progress during the spring and summer months in the building of the Cincinnati College of Medicine and Surgery, we understand, will be discontinued.

Why the institution is termed the State Hospital Medical College we have not been informed. None of the funds for its establishment have been contributed by the State, but all have been obtained by the subscriptions of the charitable. The College is the outgrowth of a free dispensary for

women and children established in the old homestead of Capt. Culbertson, an old banker, who died some years ago. It is located at 424 West Sixth Street. The originators of the free dispensary were the societies of the King's Daughters and Christian Endeavor, the attending physicians being Drs. Juliet M. Thorpe and Mary E. Osborne.

The Faculty of the College, we learn, will be as follows: George B. Orr, M.D., Dean, Professor of Surgery and Clinical Surgery; J. Trush, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine; Wm. H. Taylor, M.D., Ph.D., Professor of Obstetrics and Midwifery; Chauncey D. Palmer, M.D., Professor of Gynecology and Clinical Gynecology; Juliet Monroe Thorpe, A.M., M.D., Professor of Diseases of Children; Mary E. Osborne, M.D., Professor of Physiology; Wm. E. Lewis, M.D., Professor of Descriptive and Surgical Anatomy; Chair of Chemistry not filled; Wm. H. Dunham, M.D., Professor of Materia Medica and Therapeutics; Charles O. Wright, M.D., Professor of Dermatology and Clinical Dermatology; C. R. Holmes, M.D., Professor of Ophthalmology and Clinical Ophthalmology; Joseph E. Boylán, M.D., Professor of Laryngology and Otology and Clinical Laryngology and Otology; John C. Oliver, M.D., Professor of Pathology; D. T. Vail, M.D., Assistant to the Chair of Ophthalmology.

The Faculty is connected with the Hospital Staff as a Consultant Staff—the regular Hospital Staff being Mary E. Osborne, M.D., and Juliet M. Thorpe, A.M., M.D., with Jessie T. Bogle, M.D., as a dispensary physician, and Louise J. Lyle, M.D., as assistant.

It is stated that the College is to be conducted upon the highest educational plane, the requirements and facilities being the same as for male students in the most advanced medical colleges. We hope so. We know that there are not a few colleges, whose students are made up of gentlemen, that profess to exact the established requirements as regards educational qualifications, several years' study under a well-known, reputable physician, etc., but really do not exact anything but payment of fees.

"The most advanced medical colleges," as Harvard Medical College, of Boston, Jefferson Medical College, of Philadelphia, etc., require, we are happy to say, three courses of lectures of not less than six months each, and an examination before matriculation as regards the extent of

the education of the party proposing to become a student of medicine. In these "advanced medical colleges" ignorant men, who would fail, on examination, to obtain a certificate to teach a primary school, can not even enter as students, much less be able to graduate from them if able to pay tuition and diploma fees. The *Woman's State Hospital Medical College* no doubt aspires to take position with the most advanced medical colleges attended by male students, and hopes to be able to do so soon, but it will not probably undertake such a step at the very beginning of its career. It will have to wait until it learns whether or not it can compete with its sister female medical colleges with the same requirements. It will do well if it honestly exacts the requirements that have been in vogue with the colleges for many years—three years' study with a reputable practitioner of medicine, attendance upon two courses of lectures, and successfully passing a final examination.

The new enterprise has our best wishes. We hope it will accomplish a noble work—demonstrating the fact that women have the ability to become competent physicians; and that at the earliest possible period it will elevate its requirements to a level with the most advanced medical colleges that are attended by male students.

JEFFERSON MEDICAL SCHOOL.—We have received the sixty-sixth Annual Announcement of Jefferson Medical College, of Philadelphia. We are happy to announce the fact that this old and distinguished school has joined the ranks of the *most advanced* medical institutions of learning of this country. With the session commencing October 1, 1890, it will adopt the plan, inaugurated by Harvard, requiring attendance upon three full courses of graded instruction in order to be admitted as a candidate for graduation. The sessions will continue six months and a half, extending from October 1 to April 15.

Our readers will call to mind the lamentable failure, a few years ago, of the Bellevue Hospital Medical College to adopt, as a requirement of graduation, attendance upon three courses of lectures, instead of two courses, which had been the requirement with it and other schools of medicine since the organization of medical colleges in this country. We most sincerely hope that the efforts of Jefferson College to elevate the standard of medical education will not be attended with the unsuccessful results which followed those

of Bellevue. This can be prevented, however, at this time, by a condition of circumstances which has existed for only a few years. A number of the States have Boards of Health which have had conferred on them by law authority to define the qualifications of those who propose to practice medicine in their States. They can declare what shall be the requirements of graduation of the medical colleges whose diplomas they will recognize, and require those who have graduated at schools which have not adopted their requirements to undergo an examination before issuing to them a license to practice their profession in the limits of their States. Now, if the State Boards of Health of such States as have had such power conferred on them, especially the great State of Illinois, would resolve that they would not recognize the diplomas of such medical colleges that did not require attendance upon at least three full courses of instruction of six and a half months each for graduation, it would not be long until all the medical schools would be compelled to adopt a like requirement. Old Jefferson, then, would not be under the necessity of striking its flag to ignorance in order to get students.

When Bellevue Hospital Medical College, of New York, failed in its efforts to make one of its requirements for graduation attendance upon three courses of instruction, and was compelled to return to the old requirement of two courses, none of the State Boards of Health exhibited the disposition, which they now do, to assist in elevating the standard of medical education. The result was that, standing alone in its high position (Harvard Medical College obtains its students exclusively from the New England States and does not draw upon the States at large for patronage), a very large proportion of its patronage left it, and students, who would have attended its lectures, went to those schools which, although they had always maintained a very high standing, yet had not changed their requirements.

But supposing Jefferson, notwithstanding the times seem more favorable to take an advance step than they did when Bellevue undertook it, should begin with a great loss of patronage, will it probably succumb to the loss of students and hasten to return to the old system—two courses of lectures and five-month sessions? We hope not. Every physician of this great country who has the welfare of the profession at heart should put forth every effort to sustain

it in its course. Every medical man should exert himself to influence medical students to attend its instructions, and should refuse to take a student under his preceptorship unless he promised to go to it.

SPEECH FOR THE DEAF.—There is a school, we learn, in Cincinnati, at which those unfortunates called "deaf and dumb" are taught to speak, but we are not in possession of any definite information in regard to it, except that we have heard of one or two instances of astonishing success resulting from its instructions. At the beginning of the Christian era it required the performance of a miracle on the part of the Divine Master to make the dumb speak, but it seems that, near the close of the nineteenth century, the advance of science has opened a way to impart language to those whose conditions of organization had deprived of it.

We learn from the *Medical and Surgical Reporter*, of Philadelphia, that a boarding-school has recently been established in Scranton, Pa., to teach the deaf to speak and develop them mentally through lip-reading, when all classes of deaf children—those born deaf as well as those less afflicted—residing in Pennsylvania are admitted free. Oral teaching for the deaf, the system which in all countries but this is gradually supplanting all others, has its most complete application in the Pennsylvania Oral School for the Deaf at Scranton. The *Reporter* states that the exhibit of this school at the Paris Exhibition of 1889 received a silver medal. This recognition is of the more consequence, says the *Reporter*, as France, the country in which the sign language originated, has abolished its teachings and conducts the entire training of the deaf on the oral system.

Physicians should spread among the people a knowledge of what has been accomplished by science in the way of giving speech to those who, heretofore, have been regarded as *dumb*.

CHARITABLE ORGANIZATIONS.—Among a large bundle of printed matter received from the Census Department at Washington was a slip having the following printed upon it. As it is of general interest, we copy it:

"No organizations in the United States have multiplied more rapidly in the past ten years than the sick-benefit, funeral-aid, death-benefit, and other kindred societies.

"As they are generally confined to those who are in the

humbler walks of life, the good they have done is incalculable, carrying substantial aid to thousands of stricken families and inspiring those who are fortunate enough in being members with a courage which might not exist in their hearts without them.

"The members of these organizations will be glad to learn that Hon. Robert P. Porter, Superintendent of the Eleventh Census, will endeavor to secure the statistics of the noble work these associations are doing, and it is safe to say that no other branch of the census will be more interesting.

"The business of gathering the data has been placed in charge of Mr. Charles A. Jenney, special agent of the insurance division, 58 William Street, New York City, and all associations throughout the United States, whether incorporated or private, should assist by sending to him the address of their principal officers."

DIOVIBURNIA.—In an editorial in the *Medical Mirror*, the editor, Dr. I. N. Love, Professor of Diseases of Children in the Marion Sims College of Medicine, speaks of *Dioviburnia* as follows:

The subject of uterine disease reminds me that during the past six months I have had my attention drawn to a remedy which goes under the name of *Dioviburnia*, the formula of which is given by the proprietors, it being composed of equal parts of the fluid extracts of viburnum prunifolium, viburnum opulus, dioscorea villosa, aletris farinosa, helonias dioica, mitchella repens, caulophyllum thalictroides, scutellaria lateriflora (each fluid ounce contains three-fourths dram each of the fluid extract).

The proper dose is, for adults, from a dessert to a tablespoonful three times daily after meals.

In urgent cases with much pain it should be given every hour or two in a half glass of hot water. I am free to say that with the exception of the "black haw" (a most valuable remedy) I was not familiar with the component parts of the *Dioviburnia*, but having read the emphatic endorsement by Drs. J. B. Johnson and L. Ch. Boisliniere, of St. Louis, two of the most eminent professors and practitioners of the city, as well as that of Dr. H. Tuholske, I was induced to give the compound, a fair and thorough trial, and I am convinced that in *Dioviburnia* we have a valuable addition to our armamentarium in our battle against the enemies of the noblest work of God—woman.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 272. } AUGUST, 1890. { VOL. XIX. No. 8.
Old Series. New Series.

Original Contributions.

Physical Education in Relation to Mental Development in School-Life.

BY THOMAS MORE MADDEN, M.D., F.R.C.S.ED.

PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, DUBLIN
OBSTETRIC PHYSICIAN AND GYNÆCOLOGIST MATER
MISERICORDIÆ HOSPITAL.

Abstract of a Paper for Section Diseases of Children.—British Medical Association, Birmingham, July, 1890.

THE respective claims of physical and mental training, and the evils arising from the neglect or abuse of either, are obviously questions of the highest medical as well as social interest. This neglect now presents itself in two different aspects.—On the one hand, the children of the poor in England are compulsorily subjected at an absurdly early age to a forcing and injurious system of mental cultivation. Whilst on the other hand, in the case of those of a better social position, the physical powers are not uncommonly overtrained, at the expense of the mental faculties. Of these errors, the former is the most important, and to its operation is, I believe, largely ascribable the apparent diminution of physical stamina observable in too many of the youth of the present day as compared with the physically more robust, if intellectually less cultured, generation of the pre-educational period. Looking at the overtired and anaemic little children now chained to the desk by the School Boards, we might be tempted to believe

“ ‘Twas not the sires of such as these
Who dared the elements and pathless seas :
But beings of another mould—
Rough, hardy, vigorous, manly, bold !”

At the present time, a large part of the first ten years of life, which should be primarily devoted to physical and moral training, is given up to the development of the mental powers: the child, when a mere infant, being compelled to attend some school, where the immature brain is forced into abnormal and disastrous activity. On its return home, jaded in mind and body, to prepare for next day's task, such a child is necessarily unfit for the enjoyment of the physical exercise which is essential for its bodily development and health, or for the still more important elementary training of the affections and moral faculties and instillation of religious principles, which are better acquirable from home teachings than from any School Board system. We are all of course agreed as to the duty of properly educating children so as to fit them mentally and bodily for the increasing requirements and competition of modern life. But as to the extent to which the former should be carried and the latter neglected in early childhood, there is unfortunately a great discrepancy between the rulers of the Education Department and the views of those who have to deal in disease with the consequences of the violation of the laws of nature. And hence, whilst little children are thereby over-worked into disease or death, the physician must still raise his protesting voice, albeit it would apparently seem unheeded.

During the first eight or ten years of child-life, the amount of mental cultivation which a child's brain is capable of receiving with permanent advantage is much less than is commonly believed. No greater physiological mistake is possible than that of attempting any considerable degree of such culture until the sufficient development of the physical stamina and moral faculties is accomplished. The organ of the mind is as much a part of the body as the hand, and ere either can function properly, its vital force must be fostered and maintained by nutrition and developed by physical exercise. A large proportion of those who come within the provisions of the Elementary Education code are semi-starved children of the poorest class who, when thus debilitated by privation, are necessarily as much incapacitated for any mental strain as for the accomplishment of any herculean feat of physical strength; it being not less inhuman, injudicious and impolitic to expect the former than it would be the latter from those so circumstanced.

If the State, for reasons of public policy, determines that all children shall be compulsorily educated from their earliest years, it should certainly afford the means by which this may be least injuriously and most effectually carried out, by providing food and physical training as well as mental education for every pauper child attending an elementary school.

Amongst the results of overpressure in such schools under the Board referred to are brain disease in all forms—viz.: cephalitis, cerebritis and meningitis, as well as headache, sleeplessness, neuroses of every kind, and other evidences of cerebro-nervous disorders. On no other ground can the increasing prevalence of these affections amongst the little victims of the Educational Department be accounted for or explained, than by ascribing them to the new factors “brain excitement” and “overpressure,” which in the case of young children are now too commonly disastrously associated with the process of misdirected education and neglected physical training.

In connexion with the physical management of childhood, I may add a few words on the abuse of alcoholic stimulants. The evils resulting from the abuse of alcohol were never so prevalent as at present, and are traceable in the diseases of youth as well as in those of adult existence. The results of this acquired or inherited alcoholism are brought under clinical observation in the form of cerebral, gastric and hepatic disorders, and especially cirrhosis of the liver, as well as in the protean forms of cerebro-spinal disease, and the various neuroses so frequently noticed in hospitals for children, and to which I have elsewhere directed attention. In the majority of these cases of juvenile alcoholism that have come under my care in the Children’s Hospital, Dublin, this tendency appears inherited and most marked in those whose mothers were inebrates—intemperance in women also bearing in other ways on the diseases treated in hospitals for children, where its effects are strikingly evinced by the moral and physical deterioration of the offspring of the drunken and by their special predisposition to strumous, tubercular, and other constitutional taints.

Under no circumstances should alcoholic stimulants be given to children, save in the guise and defined doses of other remedial agents—my experience in hospital and private practice, at home and abroad, having amply confirmed the

view expressed in a work of mine published many years since, viz.: that it is physiologically wrong, as well as morally unjustifiable, ever to allow a healthy child to taste alcohol in any form.

Sanitation.—Its Relation to Health and Disease.

BY R. R. HOPKINS, M.D., RICHMOND, INDIANA.

Health is that state of a living body in which the parts are sound, well organized, and the organs perform their natural functions. In this state an animal feels no pain. Disease is an interruption or impairment of some or all of the regular functions of the organs of an animal. To define disease so as to meet all conditions is difficult. It is sometimes employed to express blood poisoning, which may be slow and obscure in its action, as in the case of effluvia causing typhoid fever. There are many obscure conditions embraced in it. There is what is termed diathesis attended with hereditary defects.

When we come to study the many definitions of disease, we are forced to conclude that not a few of them are indefinite, especially when we consider pathology. But it is as difficult to make precise statements of physiology. Still, we find that the same general laws in regard to the production and conversion of force, which prevail throughout the universe, apply to it. There is no action or motion, no expenditure of force, without waste—without change of form or material. Every thought, passion, sensation, muscular contraction, produces change. Our tissues are constantly being worn out and replaced by new. In disease there is a disproportion between waste and renewal. A very common cause of disease is over-exertion, while rest is frequently an excellent curative agent. While proper exercise conduces to health, unequal exercise—using some muscles excessively and others too little—is injurious. Some people eat too much for the amount of exercise they take. Persons often get better air by outdoor exercise than they are able to respire indoors. The changes of scene, too, are beneficial. But a sick man must husband his strength, for in spending it he spends his life.

The true conception of causation in man's forces and energies is not within the bounds of human knowledge.

We must consider life as a more or less harmonious assemblage of resultant movements following the meeting of external and internal forces. "Paul may plant and Apollos may water, but God must give the increase." "Ye shall not live by bread alone, but by every word that proceedeth out of the mouth of God." In other words, life is not sustained wholly by aliments and other aids derived from without, but also by the hidden, unintelligible, impelling vital forces originating in the mystery of heredity, or proceeding from the secrets of nature or of nature's God.

We consider that a certain disease has been caused by a virus, as we term it, acting on the blood. But the blood also acts upon the virus—the chemico-vital action is not being the product of one energy, but of two. Many of the popular notions in regard to health and disease should be inverted. The intellectual indolence by which people fall into error in consequence of inverting cause and effect is almost universal. How fatal is the mistake of persons of feeble health who endeavor to obtain vigor of body by imitating the conduct of the vigorous. Strong men can be in constant motion, endure all sorts of exposure, and recover speedily from excessive exposure. They possess great force which can grapple with outside forces. But when strength has been lowered by age or sickness, they will learn by experience that activity does not produce health—they will be taught by no little cost that over-exertion entails destruction of vital force. The leading principle of hygiene is that the strength must never be excessively taxed—it must be husbanded.

Every person must live according to his or her personal needs, and not according to theories deduced from the experience of others whose constitutional characteristics are peculiar to themselves. Every man is a law unto himself as regards meat, drink, sleep, and exercise. If a person desires to die soon, let him disregard himself and proceed to imitate the manner of life of another person—even though the party may seem to enjoy perfect health from day to day, and year to year.

An active life, it is said, is favorable to longevity; so it is with him who has the resisting force to contend with those external forces which are warring against his life, and is able to overcome them. Contests strengthen those who have the strength to carry them on. But rest and sleep also conduce to longevity. The old must have them in

abundance if it is desired that their lives be prolonged. The infant, too, must pass a large part of its time in sleep, or its life will be cut short. Cheerfulness promotes health, but health conduces to cheerfulness.

Sanitation has for its object the prevention of disease by removing its causes. As filth is one of the chief factors in the development of all epidemics, it follows that the more cleanly a population is the less will be its mortality, especially during the prevalence of an epidemic. To mankind belongs uncleanliness. Wherever filth is found it can be relied upon that human beings are not far distant. For these reasons, therefore, from an early period laws have been enacted to compel cleanliness. Some of the ancient cities decayed and ceased to exist because the soil on which they were built became so impregnated with filth that plagues and pestilences were bred, and people could no longer inhabit them. Nineveh may be given as an instance, but other great cities of antiquity might also be cited. Will the great cities of modern times share the same fate? Will they continue to grow for some centuries yet, and then be destroyed by a plague. There is danger of sewer gas and bad sanitation getting the better of the most intellectual and cultured people. Many scientists merely seek after the cause of disease, and exhibit but little interest in the means of its removal. It is now widely claimed that many forms of disease are dependent upon specific germs invisible to the unaided eye, but capable of being observed through the microscope—germs that may be propagated or destroyed. Whether these organisms are the cause or the result of disease has been a subject of doubt with some, but not at the present time, as the question has been settled beyond controversy.

It may not be convenient to instruct the people at large in regard to the various kinds of morbid germs, as micrococci, tubercular bacilli, etc., and that each zymotic affection is produced by a certain germ that causes it and no other disease; yet they should be taught that the emanations of sewer gas are poisonous and will lead to fatal results if they are not destroyed by antidotes, usually termed antiseptics. The average length of human life has been greatly increased by the discovery by the medical profession of what is termed the germ theory of disease—that is, that very many diseases are produced by the entrance into the system from without of morbid organisms. Probably this has been

the greatest discovery of the profession for many years; and when it is considered the thousands of lives that have been saved by it, it should cause the cheeks of those to tingle with shame who have defamed the profession of medicine by their assertions that physicians rather destroy than save lives.

Many persons, in seeking after luxuries, are ignorant of the fact that by their badly constructed water-closets and drain-tubes they introduce into their houses cesspools, which enable the grim reaper to gather in a richer harvest, especially from among the infantile members of families. It has been demonstrated by statistics that the various zymotic diseases have increased threefold in populous centers since the introduction of that great house improvement—the water-closet.

While it is true that the origin of infection is found in living germs, and that this germinal matter is proliferated or multiplied *ad infinitum* in the human body and out of it, and while it is true that this discovery has led to the prevention of disease and death, yet, so far, no method has been found of destroying these organisms in the body after the diseases which they produce have been developed. Chemical agents prevent their formation out of the body, and also cause their destruction, but no discovery has as yet revealed a plan of treatment of the diseases they produce, with reference to their destruction or expulsion from the body. The microscope showed that the trichina disease was the result of eating pork swarming with animalculi of a spiral form. While the discovery led to the knowledge how the affection could be avoided, yet it developed no new knowledge as regards its treatment. Koch claims to have discovered the micro-organisms that produce epidemic cholera. Though he may be mistaken, yet etiologists regard it proven that it has its origin in a peculiar germ; and this knowledge, by being acted upon, keeps that terrible plague from sweeping over Europe and this country, carrying to premature graves hundreds of thousands of men, women and children. Now that the "germ theory" has informed us by what means plagues spread, as well as how they originate, intelligent and efficient means are employed to stay their courses. No longer are cannons fired in the streets of large cities, nor tar barrels burned, to drive away the cholera. Instead of these absurd means, cordons are placed about cities and towns in which, by the

oversight or negligence of health officers, it has succeeded in finding an entrance; disinfectants are plentifully used; clothing is burned; drinking water is kept from becoming contaminated, etc. It is said that "an ounce of prevention is worth a pound of cure." Whether or not the proverb may be true, it is certain that some millions of human beings have had their lives prolonged by the advances made in medical knowledge by investigations in regard to the causes of disease.

It is hardly probable that investigators have gotten to the end of the rope. No doubt still further advances will be made, if we be patient. After awhile the poor consumptive will be treated by more effectual means than by administering to him cod-liver oil and whisky, hypophosphites, iron, quinine, extract of malt, etc. A method will be discovered that will enable the doctor to destroy the tubercular bacilli that swarm the tissues of the lungs.

Physicians should be well versed in all of the laws of sanitation. This is essential both for the prevention and treatment of diseases. In the discharge of their duties they should know how to invoke the aid of sunlight, pure air, unpolluted water, temperance in eating and drinking, and cleanliness. Polypharmacy has not yet died out in practice. Outletting by the lancet has, with doubtful gain, given way to the abundant inletting by the mouth of patent medicines, and of other drugs by the hypodermic needle. Every day the evidence accumulates and forces recognition that, if not the stars in their courses, at least air, water, food, sunlight and natural agencies as they are dealt with, war either for or against the sick. Hippocrates did well to write a treatise on hygiene—"on airs, water, and places." He who does not comprehend the right relation of hygiene to therapeutics is only half armed for the conflict with disease, even though he have the whole *materia medica* at his fingers' ends. Hygiene, coming naturally between physiology and pathology on the one hand and therapeutics on the other, ought to have a full place in every medical curriculum. The time may and ought to come when sanitary counsel will be required in a manner similar to that of legal advice, to prevent instead of only to remedy disaster. If a prudent man has property to bequeath, he has a lawyer to write a will for him. When he has a house or farm to sell, or proposes to buy one, an attorney or conveyancer inspects the title, and

attends to the proper conduct of the transaction. Why, also, should not a sanitary adviser be consulted about the situation, construction, drainage and ventilation of a proposed new dwelling about to be built or bought?

(To be continued in a future issue.)

Translations from Our Foreign Exchanges.

Translated for the MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

THE UTILITY OF LAVAGE OF THE STOMACH IN PERNICIOUS ANÆMIA.

The knowledge that we have at present of pernicious anaemia is so incomplete, that it is almost impossible to form a conception in any way just of this malady. It seems that under the denomination of "*pernicious anaemia*" there are described to-day affections differing both in origin and nature from each other, but which, nevertheless, have certain features in common. A very interesting fact of pernicious anaemia cured by lavage of the stomach has been recently reported by Dr. Maeyer, Privat Docent at Zurich. The patient was a female who, some days after her confinement, presented the classic symptoms of pernicious anaemia: Extreme pallor of the teguments and of the mucous membranes, without any marked loss of flesh; cardiac and vascular souffles; elevation of temperature to 100 F. to 103. The malady began in the last weeks of pregnancy, and made its debut with marked pains in the epigastrium — vomiting of food. Moreover, appetite altogether disappeared, and frequently stools diarrhoeal in character and of fetid odor occurred.

This patient, examined a few days after her confinement, was considered as suffering from hemorrhagic anaemia; but the treatment instituted not producing any effect, and on the other hand the weakness increasing and the symptoms becoming aggravated, pernicious anaemia was thought of, and more so as an ophthalmoscopic examination revealed retinal hemorrhages, and an examination of the blood demonstrated the poverty of this fluid in red globules. Moreover, those present were deformed; there was also present a notable quantity of microcytes. Dr. Meyer, taking into consideration the predominance of the gastric phe-

nomena, resorted to the lavage of the stomach. The symptoms improved rapidly, and a cure followed in a comparatively short time.

A like case, with similar results, was reported about two years ago by Dr. Landoz. It seems that in this case a veritable auto-intoxication was produced by a fermentation of gastric or intestinal origin.

In all cases of pernicious anaemia, a careful examination of the digestive organs and functions is of the greatest importance, for, in certain cases, therapeutic indications may be noted which may prove of the greatest value, more especially as pernicious anaemia has always been considered as a fatal disease.—*Union Med. Con.*

THERAPEUTIC INDICATIONS IN CONGESTIVE STATES OF THE BRAIN.—HUCHARD.

I. Before the hemorrhage we must prescribe a treatment capable of lowering the arterial tension, because the augmentation of this is the principal cause of the vascular rupture. Among the remedies there is one that possesses the power of lowering the arterial tension, and of modifying the condition of the arterial paristies, viz.: Iodide of potassium.

II. Immediately after the hemorrhage we must endeavor to secure vascular contraction in order to arrest the progress of the hemorrhage. Among the remedies there is one specially endowed with this property, namely: Ergot, or rather ergotine, or still better ergotinine, by subcutaneous injections (one milligr. of ergotinine equals one grammie of ergot).

One to four injections can be made per day with a solution after the following formula:

Ergotinine,	.	.	.	.	.	I Centigr.
Acid Lact.,	.	.	.	.	.	2 Centigr.
Aq. Laura Cris.,	.	.	.	.	.	10 Grammes.

A Pravaz syringeful contains 1 milligr. of ergotinine.—*Ibid.*

SWELLED TESTICLE.—One of the best local applications for swelled testicle is a poultice composed of one part of tobacco to four of linseed meal. The meal furnishes the heat and moisture, while the tobacco usually relieves the pain in a short time. This same poultice is very soothing when applied over the pubes in cystitis.—*Kansas Medical Journal.*

Selections.

Philadelphia Obstetrical Society.

[Extract.]

PERFORATION OF THE UTERUS WITH A CURETTE—LAPARATOMY —RECOVERY.

DR. Joseph Hoffman.—I was asked, the 25th of February, to see a patient in consultation, with a history of delayed miscarriage, of what was considered a six weeks' conception. I advised that the os should be dilated and the uterus curetted, to free it from the putrid product of conception. This was at once assented to, and the procedure initiated by the attending physician, a gentleman of no little experience in cases of the kind. The dilatation was done under ether with a Molesworth instrument, and the curetting attempted with the instrument here shown. There was no sign of any accident until shortly after the introduction of the curette and the removal of several fragments of partially decomposed placenta, when the operator noticed, as I myself had done, that the curette entered too far up for a pregnancy of so short a period. I said nothing, however, believing that an error had been made as to the duration of the pregnancy. At the operator's request, and seeing his alarm at the depth to which the curette penetrated, I took the instrument, and carefully introducing it far up, directing it anteriorly against the abdominal wall, easily determined that it was in direct relation with it. At the operator's request, I continued the work of cleaning out the uterus, which was done as rapidly and carefully as possible, so as to avoid re-entering the abdominal cavity. When about to cease curetting, I noticed protruding slightly from the os what I at once concluded was omentum. This opinion was confirmed by gently drawing it down with a tenaculum.

I did this both with the idea of determining certainly that the wall of the uterus had been pierced through, and of temporarily tamponing the perforation with the omentum; to control hemorrhage, and, so far as possible, shut off the peritoneal cavity from the infection of the decomposing placenta. The woman was then put back to bed, and operation speedily arranged. Four hours afterward she was again etherized and the abdomen opened. The opening of

the peritoneum was followed by the escape of a bloody fluid and some clots. The peritoneum was markedly injected, as was also its intestinal investment. In order to bring up the uterus so as to examine it for the rupture, the incision was enlarged to about four inches. The organ was found to be peculiarly softened, suggesting by its consistency a fatty kidney; there were present cracks in its anterior peritoneal covering, through which blood oozed. These may have been caused by the forcible extraction of the organ through the abdominal incision. The perforation at first did not come into view, but a little search and further extraction brought it to sight. It was situated upon the antero-lateral surface of the organ, a little below the middle. It was ragged, and of sufficient size to admit the end of a little finger. The rent was closed by interrupted silk sutures, and bled freely up to the tying of the last. Indeed, an additional one was introduced, more for the stoppage of hemorrhage than aught else. The abdomen was then flushed with hot water, and a drainage-tube introduced. Through this, fluid escaped rather profusely for three days, when a rubber tube was substituted. This acted efficiently save for one day, when it became choked with lymph. The tube was removed entirely the seventh day. A peritoneal fistula persisted for three days, when the wound closed fully, and she progressed rapidly to recovery. Owing to the length of the incision, the patient was kept in bed for three weeks. A stitch-hole abscess caused the only rise of temperature. At the present writing she is entirely comfortable, goes out daily for a ride or walk in fair weather, and, in all respects, may be considered well.

It is only fair to say here that the attending physician does not agree with me that the curette caused the perforation, but attributes it to the dilator. That there is some measure of probability that such is the case I can readily understand, though the location of the rupture, according to my opinion, was so far up as to be out of reach of the dilator, and, therefore, could not have been caused by it. This question, however, is a matter of so little importance that it is not worth further consideration.

The individual value of the case here recorded rests upon the fact that in abortions a frequent necessity for curetting and dilating the uterus arises. It shows that in special cases the uterus may be pathologically softened, and that a very moderate force may cause the accident here noted. It needs

no argument to show that in simple dilatation of the cervix rupture may also take place. One such case, followed by death in a short period, has lately come under my notice.

This fact will also explain not only deaths from forcible dilatation, but as well the cases of acute peritonitis sometimes following the operation, with tedious recovery and necessary subsequent pelvic operation.

Traumatisms in the removal of intra-uterine fibroids by the spoon saw, or écraseur, or other means, may readily extend through the peritoneal coat of the organ, and speedily terminate fatally, if this fact is lost sight of. This is beyond doubt the cause of death of a majority of the patients lost by Baker Brown in his operations for uterine fibroids. Probably the most frequent cause of perforating wounds of the uterus is the uterine sound. Fortunately the accident is rarely fatal, though it sometimes results in persistent utero-peritoneal fistula, which is abundantly proven by the cases of Sir J. Y. Simpson, as recorded by Mr. Tait. If one thing stands out more plainly than any other in the case, it is the value of early operation, if we would hope for favorable results in such or similar conditions or accidents. In another case of almost the same history, where the uterus was dilated and a filthy sponge tent introduced, and sepsis produced through a rupture of the uterus, operation was delayed until the abdomen was filled with pus, and of course the woman died. Those of us who believe in the necessity of early operation at once when diagnosis is made, need have no fear that our importunity will be patiently heard or prudently acted upon. There are, there must be, dawdlers and dalliers in surgery as elsewhere, who will wait for a puerperal rigor before they will operate; or, as they choose to express it, "run the risk of operation," and while they "stand lingering, shivering on the brink," the rigor comes, and, aided by their silly procrastination, kills the patient; then the case is reported as an operation in extremis, and the death excused for this reason.

Three such cases have come under my immediate notice within the last few weeks, and while such a condition of affairs exists it is our business and our duty to urge, in season and out of it, the folly, the insanity, or, if you please, the professional shame, that such things should be. Here is no place for sentimental mewling about conservatism. Here is a common ground where "preservation" and "conservation" mean the same thing, and "conservatism" as a

word should be dropped from our vocabulary as insane and senseless, a breath without an idea.

DISCUSSION.

Dr. William Goodell.—I should like to give my experience with the curette. While I congratulate Dr. Hoffman on his pluck and upon the result of his case, and while, with his view of the case, I think that he was justified in operating, yet I am disposed to think it was not necessary.

For instance, a lady patient of mine had a uterine hemorrhage after the age of seventy-five years. I removed with the curette, on various occasions, many papillary vegetations, evidently malignant. But, the last time I operated, the curette perforated the womb. This did not produce the slightest symptoms, and she died nine months afterward from the disease.

Dr. Taylor will recall an analogous case which we saw together. I was curetting malignant vegetations from the endometrium, when the instrument passed into the abdominal cavity, carrying, of course, with it cancerous juices, yet no appreciable results followed. While curetting a cancer of the cervix, I got into the abdominal cavity, and touched with my finger an ovary and a loop of bowel. Cancerous matter undoubtedly entered the cavity, but there was not the slightest septic infection.

I operated in another case of cancer by the high operation on the cervix, and in making the posterior incision I entered the abdominal cavity and exposed a bowel. I closed the opening by sutures, and not a bad symptom followed.

In yet another case, where I was searching for the cervix uteri, in a case of great sloughing of the bladder, womb, and soft parts, following labor, I cut into the peritoneal cavity. Unquestionably, urine passed in, yet this patient recovered after only a slight rise of temperature for two days. The cervix had probably sloughed away, and the uterine cavity most likely communicated directly with the bladder. But this I did not think of at the time. So, two weeks later, I made another effort to find and dissect out the cervix, and again, to my great surprise, got into the peritoneal cavity. As before, no harm followed this second misadventure.

Dr. M. Price.—A year ago I saw a case of criminal abortion. There was retained placenta and a septic condition. I removed the placenta, but the pelvic inflammatory trouble

increased. I operated, and found a large pelvic abscess. Owing to the great prostration, I decided simply to drain. On the fifth or sixth day she died. At the *post-mortem* an opening large as the little finger was found. If the opening had been closed at the time of the operation, the woman might have recovered.

Dr. Davis.—The case described by Dr. Hoffman is of interest to me, because I met with a similar case in hospital practice not long since. The patient had syphilis, and the fetus had died. After suffering from preliminary pains for several days, the woman came into labor at eight and a half months, with a temperature of 102°. After the expulsion of a macerated fetus, the placenta was retained. An effort to remove it by the hand resulted in getting away most of it, but a portion was firmly adherent. It was decided to allow it to remain, and to employ antiseptic treatment until it should be loosened. Thirty-six hours later, the patient's temperature rose. In my absence, the resident physician removed the remainder of the placenta with a small sharp curette, similar to that exhibited by Dr. Hoffman.

In making one especial effort with the curette, it seemed to penetrate farther than was expected, although no complaint of pain occurred. This was followed by a rapid and extreme fall in temperature. The case subsequently died of puerperal sepsis, some two weeks afterward. At the *post-mortem* examination, the fundus was found in an encapsulated abscess, and at the fundus was an area of gangrenous muscular tissue, where the placenta had been adherent by syphilitic placentitis, and gangrene of the muscle had resulted. During this case, intra-uterine injections had been given, but had always returned promptly, and there was no evidence that the uterus had ever been perforated.

A method of treating retained placenta, when complicated by sepsis, which has recently been practiced in Holland, is the vaginal extirpation of the uterus, and several successes by this method have been reported.

It is my own practice never to introduce into the uterus a sharp curette; the only one which I employ is the curette of Carl Braun, which is an instrument whose blade is as large as the thumb nail, having an edge no sharper than that of an ivory paper cutter; with this curette I have never seen injury inflicted.

Dr. William H. Parish.—I desire to say a few words in connection with the report of this case, inasmuch as it

brings up a method of treatment of abortion which I consider extremely hazardous—that is, the use of the curette. If a curette is used, it should not be such an instrument as the one employed by Dr. Hoffman. In the "American System of Obstetrics," even, Simon's scoop is figured as the instrument for the removal of the placenta. The use of that instrument is attended with very great danger. I have seen one case in consultation where, after a miscarriage of five months, the physician had used the latter instrument, and at the autopsy it was found that it had scraped deeply into the placental site, the normal roughness having been mistaken for partial attachment of an adherent placenta.

My own practice is the removal of the products of conception by the finger. This is not so difficult as it is thought to be by some. Some weeks ago, I saw, with Dr. O'Hara, a case of retained fetus at the fourth month, which had been dead for about a fortnight. I dilated with a tupelo tent for a few hours, and then with my finger removed the fetus and placenta through an os large enough to admit the use of only one finger. I first brought through the os a leg, which quickly separated from the body, as the fetus was putrescent. Then I secured the body, which separated at the neck. I then carried the finger into the brain cavity, removed the brain, made a crochet of my finger, and extracted the collapsed head. Finally, by combined manipulation, I removed the placenta with my finger, and washed out the uterus with solution of corrosive sublimate, one to four thousand, using a double-current tube. The patient recovered completely and rapidly. I have seen a number of such cases. I have never yet used the curette in abortion, and I have never yet had a fatal case, though I have treated or participated in treatment of scores of cases.

There may be cases in which it would be proper to use the curette. Where there is recurring hemorrhage, with occasional somewhat dirty flow, and where it is known that no considerable portion of placenta remains, it would not be bad practice to use the *dull wire curette*. I have in the latter cases sometimes wrapped cotton around the dull curette, saturated this with a solution of bichloride of mercury, and then rubbed this over the intra-uterine surface, and detached fragments of the membrana decidua or minute portions of placental tissue, which have been productive of the hemorrhage. I then always wash out, or swab out, with an antiseptic. The use of the sharp curette to remove frag-

ments of placenta is uncertain, unsafe, and unnecessary.

Dr. J. Price.—I agree with Dr. Parish in regard to the abuse of the curette. I do not see why the placenta can not be delivered by the bimanual method, by the intelligent finger, and not by a metallic instrument. The reason of the failure is, that the physician tries to remove it with the patient buried in the bed. If he placed the patient on the table, he could clear the uterus without difficulty.

Dr. Goodell is reasoning about a different class of cases. To compare malignant cases with puerperal is scarcely fair. Surely, Dr. Goodell would not permit a quart of putrid septic *debris* to remain in the peritoneal cavity. The omentum was in the wound, and it would have been difficult to reduce such a hernia by any other means than section. The septic condition could only be treated by drainage. Philadelphia is practically the only city in which cases of peritonitis are saved. Bantock states that never saw a case of peritonitis operated on for that condition recover. In Germany they will not touch them.

The presence of healthy urine in the peritoneal cavity will do no mischief. Dr. Goodell has referred to the introduction of portions of cancer into the peritoneum. If I felt that I had contaminated the peritoneal cavity, I should in all metro-peritoneal fractures at once close the opening, irrigate and drain the pelvis.—*Annals of Gynecology and Pediatrics.*

Allegheny County Medical Society.

J. A. LIPPINCOTT, M.D., President *pro tem.*, in the chair.

CASE OF SUSPECTED VOLVULUS.

Dr. Batten reported: On Sunday, June 8th, I saw a man who had been suffering for several days with intense abdominal pains. There was sickness at the stomach. I gave him a quarter of a grain morphia sulphate and extract of belladonna every hour. That did not control the pain, and Dr. Pollock was called in consultation. We continued with the belladonna and the sulphate of morphia every hour, and a hypodermic injection of morphia every six hours. This quieted him. The morphia and belladonna were continued steadily, and when the pains became unbearable, morphia was injected. He continued in that way, with vomiting, until Friday. I omitted to say that we injected warm water into the bowels. On Friday afternoon there

was a passage of the bowels, and we omitted the morphia and belladonna, and gave Rochelle salts in small doses. Yesterday he had three hours sleep. Last night he slept all night. To-day he is well.

Dr. Buchanan: I would like to know if any tumor could be felt.

Dr. Batten: No, but the abdomen was very hard.

Dr. Lange: I would submit that Dr. Batten has given no evidence of intussusception; it might have been a case of ileus, a case of faecal obstruction, or of typhlitis; Dr. Batten has given no evidence of volvulus.

Dr. Batten: It was an obstruction of the bowels. No hard matter came away after the bowels commenced to move.

Dr. Huselton: I would be disposed to criticise the treatment. I can not readily understand why he should resort to purgatives in such a case. Of course, the opiates would be all right to allay pain and quiet the bowels. It seems to me that purgatives would hardly be proper in such cases.

CASE OF PUEPERAL CONVULSIONS.

Dr. Duff: About one year ago, I reported a case of puerperal convulsions to this Society. I was called to see a young woman of 20, about two weeks before the time of labor. I found general anasarca as well as urine loaded with albumen, and I treated her, as I indicated in my report, by giving digitalis. About six days after, she was taken in convulsions, which could only be controlled by chloroform. These were controlled for about twenty-four hours, when they returned. I then dilated and delivered of a male child, which lived about a week. The mother made a good recovery and did not have convulsions after delivery. Against my orders, she cohabited with her husband and became pregnant within three months. Before pregnancy her urine was normal, but at four months I found considerable albumen. I then put her upon nitro-glycerin, one drop doses three times a day, with the result that the albuminuria disappeared. At six months the albumen returned, as well as the dropsical condition, when she was again put on nitro-glycerin, and there remained a slight trace of albumen during her whole pregnancy. She was confined last Tuesday morning; I applied the forceps, delivered her, and she has made an excellent recovery. I might follow this case with another almost similar in history, in which nitro-glycerin

was used with as good results ; but in a third case it did no good. Taking it all in all, however, my experience is that nitro-glycerin is one of the best remedies we can use in these circumstances.

Dr. Connell : Two such cases came under my notice. One showed about 10 per cent. albumen ; this was at the beginning of the seventh month. In about two weeks I was called to see her, in convulsions. Another case was one in which I was called by Dr. Hallock. In this case there was no albumen in the urine. The woman had reached full term, and the labor progressed slowly but favorable ; being first labor, it was of course a little tedious. During the second stage she was seized with a terrific convulsion ; during the time we were delivering her, which we did as quickly as possible, she had three or four convulsions. There was no trace of albumen in her urine.

Dr. Steward : Albuminuria, uræmia, and convulsions, during pregnancy, are invariably ascribed to circulation interferences by pressure of the enlarged uterus. But it is worthy of note that abdominal tumors as large as the uterus at term, and occupying the same situation, do not entail these results. How can this be explained ? It is to be remembered that pregnancy possesses other means to effect convulsions, namely, through the nervous system. In addition, discrimination is necessary, and all convulsions occurring during pregnancy, labor, and the lying-in, are by no means to be ascribed to, and treated as, the result of uræmia.

Dr. Green : April 28th last, I was summoned to see a child six years of age, with typhoid fever. The patient remained ill, with the characteristic temperature curves, during twenty days. During the last six days, cerebral symptoms seemed to predominate, and about the time the fever subsided and the temperature became normal, the child seemed to coalesce rapidly, and seemed cheerful. On the twenty-second day, when I called they told me the child had not spoken the past night, and had spoken but once since I made my visit the day before. She continued in this mute condition for six days, without uttering an audible note. During this time there did not seem to be any unusual delirium, but about twenty-four hours after she began to speak, she manifested considerable delirium of rather a cheerful nature. It was on the seventh day she began again to speak, and within forty-eight hours she talked as usual. I think the case unusual. The child made

a good recovery, and is now apparently as well as before the illness.

Dr. Buchanan: I have seen a case very similar to Dr. Green's. A child seven years old was attacked by typhoid fever, and passed through a typical course of fever lasting four weeks. The child was then unable to speak, but had no other cerebral symptoms whatever; in all other respects the case was an ordinary one. It returned to speech more gradually than Dr. Green's case, but finally completely recovered. I think it was almost a week from the time it commenced to say individual words until it was able to express its wants.

Dr. Huselton: I have to report a case of dislocation of the hip joint. The dislocation was that which is commonly known as the dorsal dislocation. The case had been seen and manipulated by another surgeon, and in the manipulation the head of the bone had slipped into the thyroid foramen, an accident which may happen to any one of us, and which is not so readily reduced. On my third effort, I succeeded in dislodging the bone, and it returned to its place with a snap so loud that I felt certain I had fractured the neck, but was glad to find that I had not. This is the third case of dislocation of the hip I have reduced by manipulation. The first one I had no difficulty with whatever. The second one I also succeeded in reducing without special effort. The patient made a quick recovery in this last case.

Dr. McCann: This is not an uncommon accident in attempting to reduce a dislocation of the hip joint; in the effort to place the head of the bone in its normal position, unless there be extreme care exercised, it will be thrown into one of the other dislocations. Some years ago a man was struck on the back by a railway train, and sustained a dislocation of the hip, as well as other injuries. When he was brought into the hospital it was not appreciated that he was fatally injured, and an effort was made to reduce the dislocation. The effort most signally failed for a long time; finally the bone slipped into position just as the man was dying.

A post-mortem showed that not alone the fibro-cartilage around the periphery of the acetabulum, but a bony section of the superior edge also was fractured off. The specimen was not retained. It would have been of value. A few years ago a child of ten years was subjected to several efforts at reduction of the dislocation by manipulation. The head

of the bone could be thrown into the thyroid foramen, and was apparently reduced, but as soon as the extension was removed there was an immediate reproduction of the dislocation, although a deformity did not exist. After two or three surgeons had made a number of efforts to reduce the dislocation by manipulation, the child was put in bed with extension by a splint, and eventually recovered. I am satisfied that this case—although, fortunately for the child, we had no opportunity to verify the opinion, for she lived—was also a case in which the cartilage, and perhaps some bone, had been torn off.

Occasionally, as has been demonstrated by Dr. Murdoch, dislocation which can not be reduced by the ordinary manipulations will be reduced by a little traction. I remember one in which I was able, by my own unaided effort, catching the foot and pulling powerfully upon the limb, to replace the head of the bone in the socket.

Dr. Pettit: Two cases I saw in the hospital which were reduced by extension. One had been worked with a long time by a half-dozen physicians and attendants, and there was failure to reduce the dislocation. While they were rigging up the rope and pulley arrangement to try, some one grasped the man by the limb, and by no great force, but simply by steady pulling for may be three-fourths of a minute, the bone slipped into place. Since that time I have seen one other case reduced in the same manner after quite a good deal of manipulation without success, by extension without a great deal of force, but the force being kept up some minutes steadily.

Dr. Buchanan: I recall a case in which efforts were made to reduce a dislocation of the hip in a railroad man by, I suppose, five or six competent surgeons, and when they were through, the reduction was unaccomplished, and the opinion was expressed that it must be a fracture of the rim of the acetabulum, and it was impossible to reduce it. Dr. LeMoyne requested to be permitted to put on an extension, and by extension and some little manipulation, not the ordinary manipulation, but manipulation during extension, he reduced this hip joint. This man was on the point of being returned to bed with the luxation unreduced when the successful attempt was made.

Dr. Batten: I had a case of dislocation of the hip, and could not reduce it. Dr. Emmerling, Dr. Bickson and Dr.

Reiter were present. The bone went into place with a snap under Dr. Reiter's manipulation.

Dr. Koenig: I would like to ask if it might not be possible that the position of the rent in the capsule has much to do with the return of the bone; where the surgeon is not able to return the bone by the method of manipulation, and where the method of extension is readily followed by reduction of the bone, is not the location of the rent a factor in the case?

Dr. McCann: What I wish to say is, that in the cases of extension, the patient being entirely under the influence of an anaesthetic, completely relaxed, the amount of force used was not great. In my own cases I did not exert a very great force, and it slipped in.

Another method consists in etherizing the patient, laying him on his abdomen on a table, and allowing the limb to hang down over the end of the table. The result is that after a certain length of time the muscles of the abdomen relax, and with almost no manipulation the head of the bone is thrown into its proper position.

Dr. Huselton: A farmer sustained a simple dislocation of the shoulder. He was taken into the town of Harmony, where two surgeons tried to reduce the dislocation. They failed, and had the man loaded into a spring wagon and sent to my office, with a note asking me to call in some of my friends and attempt to reduce the dislocation, and in the event of a failure, to send him to the West Penn. Hospital. I said I would make an attempt to reduce it myself. I took the patient into my back office, laid him upon the lounge, and standing behind him, I pulled and told him to pull, which he did, and I think the dislocation was reduced in about two minutes. Now these were competent men who failed with this case, and they seemed to have exhausted every effort. Therefore I think we should be very charitable indeed before we condemn a physician for failure to reduce a dislocation.

THREE CASES OF FATAL PERICARDITIS, WITH AUTOPSIES IN TWO.

Dr. Lange: I wish to report three fatal cases of pericarditis. The first was a large German, previously healthy, with no discoverable hereditary taint except that his mother had died of some lung disease at the age of thirty-two. This man was a cooper by occupation, and boasted of his

previous excellent health. He presented, on examination, the usual signs of pericarditis except that of pain, and in addition the ordinary signs and symptoms of a slight fever. Pericarditis was suspected in this case, and during the next three weeks under observation it was ascertained to exist. This man died of heart failure on the water closet. The autopsy showed the heart to be the so-called hairy heart. There were numerous and strong adhesions between the parietal and visceral layers. Other lesions consisted of organized bands from the visceral to the parietal pericardium of from a quarter to an inch in length, and as strong as the chordæ tendinæ. These must have exerted a potent and pernicious influence upon the contraction and rotation of the organ. Still other bands were free at one extremity, which floated in the very limited amount of effusion. This was a tubercular pericarditis, and nowhere else throughout the body was tubercle discovered.

The second case occurred in an Italian aged thirty-five, who had a left-sided, lower-lobed, croupous pneumonia accompanied by a pleuritic effusion large enough to require tapping. In the third week, resolution not happening, the pneumonia became purulent, and thus developed the secondary pericarditis. On autopsy, the heart was found to be like the first case, and the effusion to be small. This patient died while sitting on the edge of his bed.

The third case was an Irishman, a very active man, yard-master at one of the railroads here. He came to my office complaining of shortness of breath, and presenting the signs, symptoms and phenomena of a mild fever. He had no pain, little headache, little backache, general *malaise*, anorexia; in short, all the signs and symptoms of a mild fever, a pericardiac friction murmur, and a tumbling heart, but no enlarged area of cardiac dullness. *Dyspnoea* was his only complaint. He had it two months, and it was growing. After two weeks he thought himself so well that we could not restrain him. He would leave his bed and go about the room. One Sunday morning he sent for a barber to shave him. He got up, sat on a chair, took the Sunday paper to look it over, and fell dead. There was no post-mortem. From repeated physical examinations, I believe the conditions would have been found as in other cases. In pericarditis of gravity, which cases constitute the small minority, there is one remedy to which we at last arrive. This is digitalis. It is said that digitalis is proper to strengthen

the action of the heart. My experience with these cases and others leads me to think that digitalis has very little effect in increasing the power of the heart in pericarditis.

Another point is that death from pericarditis, which is usually ascribed to the size of the effusion when it is large, may be due rather to interference with the action of the heart by adhesion. It is my opinion that this latter is frequently, and that large effusions are rarely, the cause of death. Large effusions belong rather to those inflammations of the pericardium which complicate rheumatism and nephritis, and which are not fatal. When the effusion is large, what can we expect from digitalis? The interference in this case is not with contraction, but with the filling—the diastole of the heart; and this being purely a muscular relaxation is uninfluenced by digitalis. The only effect then that we should expect is that which would happen after the administration of digitalis, in, for instance, the granular degeneration of typhoid fever, pneumonia, or any disease of gravity and duration; and this, it must be confessed, is little. The effect, indeed, would be less, for even if the systole should be improved by digitalis, the diastole can not be, and consequently the intra-arterial tension is not increased. On the other hand, if the adhesions constitute the obstacle to efficient contractions, we can understand how an increase of power in systole by digitalis might fracture, tear off, or free the parietal from the visceral pericardium, and thus allow an increased quantity of blood in the arterial system. But I have not observed this to happen, and the administration of digitalis for pericarditis is pregnant with disappointment, and is in striking contrast with its effects in heart dilatation.—*American Lancet.*

Dosage and Administration of Creosote [Beechwood] in Phthisis.

If we devote so much space in this issue to the consideration of creosote in phthisis, it is because several experiences of the Editor have convinced him of its special value, and because, from his conversations and correspondences with Southern and Southwestern doctors in particular, it does not appear that this agent has ever yet been generally tried—notwithstanding the very excellent article on the subject

by Dr. William Perry Watson, of Jersey City, in the October number, 1889, of the *Virginia Medical Monthly*.

Dr. Wm. H. Flint, of New York, N. Y., in a paper read before the New York Clinical Society, May 23rd, 1890 [published in the *New York Medical Journal*, July 26], says that convincing proofs of the efficacy of this remedy have been furnished by many authors. The papers of Dr. Beverley Robinson deserve particular mention. But in view of divergent opinions regarding the dosage and administration, the writer considers a discussion regarding the quantity of the drug to be employed, and the best methods of its exhibition, as opportune.

Bouchard and Gimbert (to whom belongs the credit of rescuing the creosote treatment of phthisis from oblivion, after its discovery by Reichenbach, early in the nineteenth century,) suggested (in 1879) six or seven drops as the average daily dose, to be increased if easily tolerated. Their favorite formula was—

R.	Creosote	m xxxij;
	Tincture of gentian . . .	m lxxij;
	Alcohol	5 x;
	Tokay or Malaga wine . . .	5 v.

Dose, from 3 j to 5 ss.

Dr. Beverley Robinson (1878) at first used the creosote mixture (U. S. P.) in dessertspoonful doses. This is composed of creosote and glacial acetic acid, each, m xvij; spirit of juniper, fl. 3 ss; syrup, fl. 3 j; distilled water, fl. 5 xv. Each ounce contains one minim of creosote.

In 1886, Dr. Robinson adopted antiseptic inhalations in his treatment of phthisis, using, by preference, a mixture of equal parts of creosote and alcohol, or of creosote, alcohol, and chloroform. In 1889, he again described his method, recommending the inhaler now known by his name, and three solutions well adapted for use in it. Their composition is—

i. Recommended by Brunton, modified by Robinson :

R.	Iodoform	gr. xxiv;
	Creosote	m iv;
	Oil of eucalyptus	m vijj;
	Chloroform	m xlviij;
	Alcohol, }	aa q. s. ad. fl. 3 ss. M.
	Ether, }	

2. Formula of Dr. Coghill:

R. Tr. iodi ætherealis, }
 Acid carbolici, }
 Creosote 5 j;
 Spts. vin. rect ad. 5 j. M.

3. Dr. Robinson's own prescription:

R. Creosote 5 j;
 Alcohol ad. 5 ss.

The inhaler was worn at first for 15 or 20 minutes every three hours, and from 10 to 20 drops of the mixture were placed upon the sponge at least three times in twenty-four hours.

For internal administration, Dr. Robinson employed the following formula, which is adapted from Jaccoud:

R. Creosoti m vj;
 Glycerini 5 j;
 Spts. frumenti 5 ij. M.

The dose generally was one teaspoonful every three hours, diluted with two parts of water to prevent irritation of the throat and stomach. Dr. Robinson contended that creosote should be begun in moderate doses, continued a long time, and increased gradually. His average daily dose was from three to six minims, and this quantity he administered for many months.

Dr. Austin Flint used three or four drops thrice daily, and inhalations of the creosote, chloroform, and alcohol solution, already described, at first for a few minutes, three times a day, and then increasing up to four or eight hours a day.

Prof. Sommerbrodt, of Breslau, strongly advocates heroic doses, upon the assumption that enough creosote may be given to so charge the blood with the remedy as to antagonize the development of tubercle bacilli. He bases his method upon the researches of Dr. P. Guttmann, who showed that tubercle bacilli could hardly be cultivated in sterilized serum containing $\frac{1}{4000}$ volume of creosote, and that the culture could not be carried on if the solution were a little stronger than 1 in 4,000. He tested his method in hundreds of cases, using capsules, each containing one minim of creosote. Begin with three capsules the first day, and add one each succeeding day until the eighteenth day, after which the maximum quantity, from twenty to twenty-five minims *per diem*, is administered for many months. His success in any given case was in direct ratio with the amount

of creosote taken. One patient took nearly nine ounces of creosote and 35 ounces of Peruvian balsam in nine months, with very good results.

Dr. P. Bogdanovitch, in his own case of pulmonary and laryngeal phthisis, for two years took half a grain, four or five times daily, without effect. He then commenced with four grains daily, and increased the quantity within two months to *forty-four grains* in twenty-four hours. The results were speedy amelioration of the cough and dyspnœa, diminution of sputum, and disappearance of fever and laryngeal spasm. The bacilli remained just as numerous as at the beginning of the treatment. He infers that five grains should be taken four times a day, in capsules, after food.

This heroic Russian method would hardly be adapted to the average invalid's stomach in these latitudes. Even Dr. Bogdanovitch experienced epigastric discomfort after taking small doses on an empty stomach. This symptom did not occur when even twelve grains were taken *after meals*. If, however, twelve grains were taken at a single dose, or twenty grains within an hour, Dr. B. suffered from giddiness, cardiac palpitation, weak pulse, asthenia, pallor, and anxiety. All of these toxic symptoms disappeared within an hour, and did not return.

Dr. Lanisniée claimed that nausea and vomiting from creosote might be avoided by the following formula:

R. Creosote 5 centigrammes ;
Balsam of Peru $7\frac{1}{2}$ centigrammes ;
Norway pitch $7\frac{1}{2}$ centigrammes ;

M. Make one capsule. S. Take four capsules with the meals, morning and evening, and gradually increase to twelve daily.

Dr. Rosenbusch injected eight minims of a three per cent. solution of creosote in almond oil into two spots in the diseased lung at intervals of two or three days. The points were either the second intercostal space or the supra-spinous fossæ. The only unpleasant symptom was pleuritic pain, when the injections were too near the pleural surface. No hemorrhages occurred after the injections, but the sputum of one patient, who had already suffered from hæmoptysis, was slightly colored for a short time. Other observers have not attained the good results alleged for intra-pulmonary injections of the creosote.

Dr. T. Stachiewicz carefully employed Rosenbusch's method. Cough and expectoration notably increased after each injection. He concludes that, if cavities have formed, creosote injections may cause rapid destruction of pulmonary tissue by engendering inflammation. He also believes that haemoptysis is likely to follow intra-pulmonary injections.

Dr. Mackey used intra-pulmonary injections of a three per cent. solution of creosote in olive oil. The seventh injection, however, caused haemoptysis and increased the inflammatory symptoms so that the treatment was abandoned.

Dr. J. Rosenthal advocated carbonic acid water as a menstruum for creosote—based upon experiments as to the effect of solutions of creosote in carbonated water upon cultures of micro-organisms. Rosenthal found that their growth was arrested by carbonic acid water containing one part in 2,000 of creosote. Other experiments showed that creosote, even in weak solutions, will not only hinder the growth of the micro-organisms, but will actually kill the latter. They also demonstrated that a sufficient quantity of creosoted water can be given hypodermically to a rabbit to make a dilution of one to four thousand in its blood without causing appreciable morbid symptoms. Creosote solutions of this strength were shown by Koch to greatly retard the growth of tubercle bacilli in various culture media. Rosenthal recommended that the carbonated creosote water be of such strength that each litre should contain from 0.6 to 1.2 of creosote and 30 grammes of cognac. The doses of this solution are so arranged that 0.1 of creosote is taken on the first day, and the remedy gradually increased until the daily dose is 0.8.

Von Driver used creosote mixed with alcohol and sherry wine, according to the formula of Frantzel, as follows:

R. Tr. Spts. Vini	Creosoti, gent, vin. rect., xeric.,	m xv. m vj. fl 3 vj. q. s. ad. fl 3 iv. M.
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Sig. 3 ss. t. i. d., with water.

He believed in the heroic method, and increased his doses as rapidly as possible until the maximum was reached (*i. e.*, 11½ grs.)

Groh administered creosote in wafers intimately mixed with powdered cacao.

Dr. Jas. E. Newcomb reported favorably concerning creosote at Roosevelt Out-patient Department. He administered the creosote by mouth only.

R.	Creosoti,	{	. . .	āā	3 ij-3 iij.
	Tr. capsici,				
	Mucilag. acac.,				3 ss.
	Aquæ,				ad. 3 iv.

M. Sig. 3j, well diluted with water, after meals.

Dr. Ruetimeyer uses creosote in emulsion, with olive, almond, or cod liver oil, in which form it is fairly palatable, and causes hardly any indigestion.

Dr. Dor advocates intra-tracheal injections of sterilized olive oil, containing creosote in the proportion of one part of creosote to twenty of oil, continued for many months. Inject thirty-one minims of this mixture, containing 3.1 grains of creosote, twice daily; he never observed untoward results—such as haemoptysis, fever, or pleuritic pain—to follow the injections. After the injections, the patients are made to assume positions adapted to facilitate the gravitation of the creosote to the diseased part of the lung. The fact of its penetration is evidenced by the production of sub-crepitant râles. The digestive disturbances often resulting from the internal administration of creosote were entirely absent in his cases. His experiments with animals showed that the oil reached the alveoli, and remained there for fifteen days in some cases before undergoing complete absorption.

The writer's experience with creosote in phthisis embraces seventy-three cases, among which there have been examples of all stages of the disease. The cases were divided into three classes, according to the methods of treatment adopted—

1. Those in which creosote inhalations were alone employed.
2. Those in which creosote was administered both by inhalation and by the stomach or the rectum.
3. Those in which the drug was given only by the stomach or the rectum.

So far as the limited experience of the writer goes, it tends to show that neither of these methods *invariably* furnishes the best results. The inhalation method was, naturally, most successful for patients whose gastro-intestinal tracts were diseased, while the other methods were more satisfactory, producing more immediate, and even phenom-

enal results in cases whose digestive organs were in a fairly healthy condition.

The inhalation solution was equal parts of creosote, alcohol, and chloroform. It was very acceptable to patients, save in a few in which it caused nausea and gastric distress whenever employed. The inhalers used were Dr. Robinson's and that of the Brompton Hospital. In mild cases, the inhalations were administered for fifteen minutes, every two or three hours; in severe ones, every hour during the day-time and every three hours at night. From ten to fifteen drops of the solution were placed upon the sponge about every five hours during the day and twice during the night. The writer at first relied upon Jaccoud's solution, composed of creosote, m vj; glycerine, $\frac{5}{3}$ j; and whisky, $\frac{5}{3}$ j. This was well borne by strong stomachs, but the dose could not be greatly increased without an undesirably large amount of glycerine and whisky. The former in large quantities perhaps engendered gastric distress quite as much as the creosote, and produced too free peristole of the stomach. Whisky, in the early stages, seemed contra-indicated when there was little need of stimulants, and also exposed patients to the risk of contracting an undue fondness for alcohol. Hence the writer early adopted an emulsion composed of cod liver oil, forty parts, and mucilage of acacia, sixty parts—each drachm containing two minims of creosote. This was generally better tolerated than the glycerine and whisky, particularly when given after food. In suitable cases, the emulsion was given every two hours, and the dose increased up to the point of toleration, which, in the majority of the cases, was about ten or twelve minims *per diem*.

In many instances, when patients could be persuaded to temporarily adopt an exclusively milk diet, the creosote emulsion was administered in milk, thoroughly mixed by means of energetic shaking. He administered more creosote in this manner without exciting gastric symptoms than by any other method. In a few cases, twenty-four minims of creosote were daily given in this way for several consecutive days before the growing gastric distress necessitated a diminution of the dose. Some patients do not object to the flavor, and some mix the creosote with only a part of the milk to be taken, reserving the remainder of the milk for the final swallows. In this way the after-taste is greatly diminished, and it may be quite removed by any good mouth wash.

Rectal injections of milk containing the creosote emulsion, and which the writer has not seen referred to in medical literature, have also proved very valuable in his experience. This channel for the introduction of creosote may be advantageously employed when the stomach or the palate rebels against administration of the remedy *per orem*. One or two drachms of the emulsion, containing, respectively, two and four minims of creosote, may be shaken up with four ounces of milk, and such an enema may be given every five or six hours. When the rectum becomes intolerant of this treatment, a small amount of laudanum may be added to the enema to obtund the sensibility of the bowel, and from two to four drachms of whisky may be added where stimulation is indicated.

Another mode of administration which promises much, but which awaits development, is by means of keratin-coated or other so-called enteric pills. The writer has been thus far disappointed in his efforts at securing pills which would not dissolve in the stomach. The solubility in the gastric juice of those keratin-coated pills which he has employed was proved by eructations of creosote and by the rapid development of gastric irritability. It is, however, quite reasonable to suppose that the pharmacist's art will eventually provide pills or capsules which will resist the action of the gastric juice and liberate the creosote in the intestinal canal, being dissolved by the pancreatic juice and the bile. This part of the digestive tract may thus be made to absorb the creosote when the stomach or the rectum is incapable of its appropriation.

The conclusions reached by the writer, are :

1. Intra-pulmonary and intra-tracheal injections of creosote are of doubtful utility, and may be positively injurious.
2. For administration by mouth or rectum, solutions and emulsions of creosote are preferable in most cases to capsules, pills, or wafers.
3. Milk is an excellent vehicle for the administration of creosote in solution or in emulsion.
4. Each method of administering creosote, viz., by inhalation, by mouth or rectum alone, and by both these channels simultaneously—is useful, and may be partially adapted to individual cases. In suitable cases the most rapid progress seems to be made when all these ports of entry are utilized.
5. The best results for each individual attend the admin-

istration of the maximum quantity of creosote which this patient will bear.

6. The average patient will not easily tolerate more than ten or fifteen minimis of creosote *per diem* for any great length of time, and many will bear only two or three drops *per diem* continuously administered.

7. It is very important that the treatment be uniform and uninterrupted.

8. Consequently, an effort should always be made, if intolerance of creosote is shown by any one mucous surface, to employ some other channel of introduction, in order that the continuity of the treatment be not interrupted.

Dr. Beverley Robinson said he believed in creosote as a very useful remedy in this disease. After reading Bouchard's papers he commenced using creosote; but in the beginning he had only had faith in it as a good anti-catarrhal agent. Creosote must be given in small doses and continued a long time. Some patients might bear large doses well, but it was always a risk to insist upon them. He had always used creosote by the mouth or inhalation, and had no experience with the method of giving it by the rectum. He was not favorably disposed towards this other way of giving the drug. Creosote should be pure, well diluted, and perfectly dissolved, in order to prevent any possible danger of stomachal intolerance. The dose of a half to a minim should be given five or six times in twenty-four hours, and increased in amount very slowly. It should be continued for months at a time, and indeed so long as there was any indication for its use. Taken in this way it would usually produce good, and at times, remarkably good effects. Sputa would diminish and disappear, nutrition was benefited, strength increased, and cough arrested. The local signs were sometimes much improved. He had known, in at least two cases, the bacilli to disappear entirely from the sputa, where they had previously been recognized. In several cases he believed he had seen patients recover. Altogether, in his judgment, creosote was the best remedy we now were in possession of for the amelioration and possible cure of pulmonary phthisis. We must not, however, run risks of disgusting our patients with it by increasing the doses too rapidly. Above everything we must preserve the digestive organs intact, and must not interfere with the assimilative process. If we do this, we lose immediately all the possible good effects from creosote, and take away from

the patient one of his reliable chances of living. Whenever it could be carried out, he liked the combined effort best—of inhalation and administration by the stomach.

Dr. W. H. Katzenbach remarked that, for the last year or so, he had employed creosote in the treatment of phthisis in private practice, and with results corresponding with those mentioned by Dr. Flint and Dr. Robinson. Under its administration, in a good proportion of cases, appetite and digestion had improved, cough and expectoration had subsided, fever abated, nutrition increased, and the patient gained in weight. A woman, aged twenty-three years, consulted him early in March with signs of phthisis in the second stage, involving a considerable portion of the upper lobe of the right lung anteriorly. Her temperature was 100.5° F., pulse 120, and respiration 32; weight, one hundred and seven pounds. She was given creosote in conjunction with cod-liver oil and extract of malt. By the middle of March her appetite had improved and cough had diminished. Menstruation reappeared, and she felt stronger in every respect. By the latter part of April her temperature was 98.5° F., pulse 80, and respirations 24. The respiration over the affected lung was still broncho-vesicular, but the râles had disappeared. Her weight was one hundred and eleven pounds and five-eighths. In medicinal doses, Headland had said that creosote had "a double action, being anodyne, like hydrocyanic acid, and a mucous stimulant, like turpentine." When begun, creosote might increase cough and expectoration from its liquefying action on the sputa, but subsequently secretion diminished or was arrested, and cough was relieved. In the late stages of phthisis, with cavities, high fever, copious expectoration, loss of appetite, and impaired digestion, the results had not been favorable. The following formula was the one commonly used:

R—Creosoti (beechwood), 5j.
Glycerin, ad 5ij.

M. Sig.—Take a half teaspoonful after meals and at bed-time, with whisky, a half to a teaspoonful, and water two ounces.

Dr. W. G. Thompson wished to add his testimony to the value of the results of the creosote treatment in many of Dr. Flint's cases of phthisis. He had used the drug extensively for years, and was convinced that it was, upon the whole, the most useful remedy that we possess for control-

ling many of the more urgent symptoms of phthisis, notably diminishing cough, expectoration and dyspnoea, and favoring gain in nutrition. In cases fairly advanced, he believed in pushing the administration of the drug to the limit of toleration. This limit was considerably extended by taking great pains to secure a pure wood creosote, and to administer it in the careful manner described by Dr. Flint. When the stomach shows signs of irritation from large doses of creosote, he had found it to be still very well borne when administered by the rectum in five-minim doses, in emulsion, or by inhalation. If the inhalers worn were not deep enough, excoriation might result. The speaker thought that we were still completely in doubt as to the mode of action of the drug in phthisis. In man there were fourteen pounds of blood, in which any so-called "antiseptic" remedy must inevitably be diluted when absorbed, and it was easier for him to believe that creosote might act by altering in some manner the tissues or "soil" in which the tubercle bacilli grew, or by improving bodily nutrition, than to admit that its influence was in any way germicidal, even when inhaled. In the latter case, it was difficult to prove how deeply it diffused into the lungs, or that it ever came in direct contact with many foci of bacilli.—*Va. Med. Monthly.*

The Contagiousness of the Pulmonary Phthisis.

THE Paris Academy of Medicine recently held an earnest debate, in which some of its most distinguished members took part, on the subject of the contagiousness of pulmonary phthisis. The resolutions offered by Dr. Villemin were overruled, and resolutions less clear and defined adopted in their stead. In a remarkable study on the subject, published by Doctor Cimbali, of Rome, the following conclusions were reached :—

1. Phthisis is a contagious disease, contact being the usual means of propagation.
2. The vehicles of contagion of phthisis are the milk of tuberculous cows and the sputum of phthisical persons, and infection may be communicated by the gastro-enteric or the respiratory mucus membrane.
3. The transmission of phthisis, as a specific disease, is rare, but the predisposition to contract it is frequent.
4. All persons exposed to the action of the germs of the phthisis are not liable, in consequence, to contract the

disease. Those only who have a predisposition to it will be attacked by it.

5. The most favorable conditions for contracting phthisis are: Youth, a cachectic condition, constitutional or acquired debility, catarrhal affections of the respiratory organs, and the presence of phthisis in father and mother.

Prophylactic measures should have a double object:—

1. To prevent the germs of phthisis from spreading freely and infecting healthy persons.

2. To increase the resistance of organisms predisposed to phthisis, and recommend the avoidance, as far as possible, of association with persons affected with tuberculosis.

Phthisis being usually a chronic affection and very general in some countries, the majority of persons affected by it being able to go about their usual avocations, often for a long period, without suspecting their condition, the progress of the disease, which is often mistaken for a simple bronchial catarrh, being very insidious, it is difficult, while fully recognizing the contagious character of the disease, to insist upon the isolation of phthisical persons. Society would not permit the isolation of from one-quarter to one-seventh of its members, nor would science venture to advise so stringent a measure, which, beside being an attempt against individual liberty, would be of difficult execution. Isolation is practicable only in hospitals.

Disinfection or destruction of the medium containing the germs of phthisis and constituting the vehicle of contagion is strongly recommended. Every phthisical person should expectorate into a cuspidor. This cuspidor should contain water or a disinfecting liquid, and should be furnished with a cover. The sputum should be destroyed by heat, and the vessel cleansed with boiling water. There are other preventive measures which are important, but of difficult execution. These are:—

The disinfection of all articles that have belonged to a phthisical person before they are used by a healthy person. Houses in which phthisical subjects have lived should be rigorously disinfected before occupation by healthy persons. Milk from cows known to be tuberculous should not be used as food before being boiled. If these means were employed, the agents of phthisis would be less widely disseminated and the disease would consequently be less frequent.

All persons predisposed to phthisis should as far as possible avoid places in which the disease may be contracted (col-

leges, barracks, workshops, etc.). The children of phthisical persons should not live in the house with their parents.

As most persons predisposed to phthisis offer feeble resistance, and a vigorous, robust organism is a soil little adapted to the growth of the bacilli of phthisis, all possible precautions should be recommended, and hygienic and therapeutic rules, the object of which is the improvement of nutrition and the building up of physical strength, should be carefully indicated.

Phthisical subjects, if young and descended from phthisical parents, should have occupations which permit them to pass the greater part of the day in open air. A simple and regular life, plain and substantial food, a country life, hydrotherapy, gymnastic exercises, excursions in the mountains, etc., are to be recommended for building up the strength of consumptives. It is indisputable that if the measures, general and individual, recommended as preventive of the disease were adopted, the number of persons attacked by phthisis would be greatly diminished. Unfortunately phthisical persons live the ordinary life and disseminate the germs contained in their sputum. Physicians should strongly recommend the prophylactic measures suggested by science and experience, and insist upon the dangers of their non-observance.—*College and Clinical Record.*

Clinical Lecture on Diseases of the Rectum.

BY JOSEPH M. MATHEWS, M.D., LOUISVILLE, KY.

GENTLEMEN: It is only within the last decade that any serious attention, in a practical way, has been given by the profession to diseases of the rectum. Time was when all such cases were turned over or allowed to go to the pretending charlatans. Latterly, however, much attention has been given to this very annoying branch of surgical disease, and it behooves you to pay some attention to it. We have, presenting at the Clinic to-day, quite an interesting variety of rectal diseases.

Case 1. This man, who is about thirty years of age, appears to be healthy in every particular. His complaint is, he says, an *attack* of piles. You will find that the major portion of those suffering from any form of rectal trouble will denominate the affection piles. Thus it has been my experience to find such diseases as pruritis ani, fistula in ano,

polypi, and even cancer of the rectum, designated as piles, by the patient. You will notice here upon the left verge of the anus, a swelling about the size of a chestnut, very sensitive to the touch. It is of a dark blue color, and covered partly by mucous membrane, and partly by true skin. The attack came on suddenly, likely the result of a strain at stool. This is one variety of external piles, and is caused by the rupture of a small blood-vessel; a slot is formed just under the skin by coagulation, and thus imparts to it the bluish color. The other variety of the external pile is the existence of a superfluous amount of, or a tag of skin, which enlarges under inflammation. For the radical relief of this condition, presenting here, it is advised that the knife be drawn through it, thereby releasing the clot, which can be turned out. I shall, however, practice a different procedure and give my reasons as we proceed. Drawing into this hypodermic syringe ten drops of a four per cent. solution of cocaine, I will inject it into the base of the tumor. While we wait for its effect I will say that, in as far as this splendid local anæsthetic is concerned, it has been of but little service in doing operations around the rectum. In operations for internal hemorrhoids, deep-seated fistulas, strictures, ulcerations, polypi, or divulsions of the sphincter muscles, it is of very little practical use. In laying open superficial fistulous tracts, lancing abscesses in this region or in operations upon external piles, it is of service. The manner of using it is as you have witnessed here. By taking this tumor between my fingers you will observe that it is not now at all sensitive, so I shall begin its removal. In lieu of cutting *through* it, I will introduce this sharp-pointed knife at its very base in the true skin and sweep completely around it, from the margin of mucous membrane on one side, to the corresponding margin on the other side. Pulling the tumor down, which now hangs, only held by some tissue and mucous membrane, by these four-fingered forceps, I push this linen thread to the bottom of the cut, and tie it very tightly. I will now cut the tumor off, close up to the ligature. Dusting freely with iodoform, the gauze is applied, then a roll of absorbent cotton, all of which is held in place by a bandage. My reason for extirpating this tumor, instead of cutting through it, is this: The simple lancing, even if the clot is freely evacuated, inflames the tag of skin left, and it would be a number of days before it subsides; being left, the same thing would be likely to recur. By its

free removal there is much less inflammation, scarcely any after-pain, and no possibility of its reoccurring. I have used a ligature in this case simply to prevent hemorrhage, as this tumor is much above the usual size, and involves some blood-vessels. Ordinarily all *external* piles can safely be cut off.

Case 2. Here is a case beautifully representing the *internal* variety of hemorrhoids. Permit me to say here that I believe the best division of hemorrhoids to be *external* and *internal*. More than this confuses, rather than elucidates. This patient has been given an enema of hot water and asked to strain as she passes it off. This is the best way to bring internal piles into view. You will observe that they encircle the anus completely. It is possible to define and count five tumors, two very large ones. The other three are small. We will operate on this woman for the radical cure of her piles. The question naturally suggests itself to you, "What is the simplest and best method of operating?" I unhesitatingly say that the *ligature* is. It has been tried for many years by the ablest surgeons of this country and Europe, the vast majority of whom pronounce in its favor. I believe it to be one of the safest operations in surgery, and when compared to such methods as the clamp cautery, and injections of the tumor, Whitehead's operation, etc., will be found to possess advantages over each and all of them, without their disadvantages. I have here some ligatures of strong linen thread, well waxed. I prefer this thread to silk, on account of its strength. We begin by drawing gently down one of the smaller tumors. Each one of them will be ligated before we touch the larger ones, because they might afterward escape notice. This small pair of forceps holds it nicely, the thread is passed to the tumor's base, and tied tightly. This is repeated with the other two smaller tumors. This large pile is now caught by a forceps that I have had my instrument maker manufacture. You will notice that it has a *serrated* edge, instead of prongs; by closing the blades they lock, and the ends of the handles are roughened. The advantages are these: If your assistant is giving the anæsthetic, or you are doing the operation without an assistant or anæsthetic, you catch hold of the tumor firmly at its base, lock the forceps, and catching the roughened end of the blades between your teeth, tie the ligature. The serrated edges have the advantage over the forceps, in that they do not tear through the tumor. Having a good

hold on this large hemorrhoid, I introduce this curved needle, threaded with the ligature, through the base, and now cut away the needle. The pile is tied on both sides, and the upper half of the tumor is cut off. The advantage in the transfixion is that the ligature can not slip, and that having only one-half of the tumor to cut through, will do it in one-half of the time. The tumors are returned into the rectum, a cotton pad and a T bandage will be applied by the interne, and the patient put to bed. The bowels will be confined two or three days, only a milk diet will be taken for this time. The ligatures will fall off within eight days, and the patient will be discharged—cured. You will have noticed that I neither gave the patient an anæsthetic nor used a cutting instrument. I am often asked the question, "Is it necessary to administer an anæsthetic in operating for internal piles?" I make this my rule and guide, viz: If there be a superfluous amount of skin around the anus, an anæsthetic is indispensable to operate, because much pain will be inflicted in order to remove it. If the tumors can be well protruded, and no extra amount of skin, then I operate without an anæsthetic.

Case 3. It is not necessary to go into the minute history of these cases; their affection is altogether local, and has no general significance. This man, as you will notice, has an external opening of a fistula, beginning over the lower border of the sacrum; careful probing reveals the fact that the sinuses run up the back, and not as we would expect toward the rectum. It is not then a fistula *in ano*. I would impress upon you the fact that oftentimes you will witness sinuses in this region, that have no connection with the gut. You would make a serious mistake, were you to force the probe into the bowel, under the mistaken idea that all sinuses here lead to the bowel. This tract runs fully four inches directly up the spinal column. We will throw ten to fifteen drops of the four per cent. sol. mur. cocaine along the side of the tract, and if sensitiveness has not disappeared, repeat it on the other side. We have now a perfectly numb condition of the tissues. Pushing this grooved director entirely up the sinuses, we lay the tissues freely open. You will see here about the center a cavity into which my finger can be lodged. Seeking with the probe, I find more sinuses running off from the main one. I treated each one by free division. We will now trim the indurated edges, stop the bleeding by hot sponging, dust the whole

wound with iodoform, apply the gauze and bandage, and put the patient in bed. The irrigation that the nurse has kept up during this operation has been of a hot solution of the bi-chloride mercury 1-5000.

I shall direct that this dressing shall not be removed for at least five days. You will find that the dry dressing of these wounds is much to be preferred to the often repeated *washings* that some surgeons give them. One especial point that I wish to impress upon you in operating for fistula in ano is, always lay freely open every branch sinuses that may exist. If you do not, your success in such operations will be very poor.—*New England Medical Monthly*.

The Therapeutic Value of Antipyrin in Some Diseases of Children.

BY S. HENRY DESSAU, M.D., NEW YORK.

The daily experience of the medical practitioner demonstrates the truth that no class of remedies of recent introduction has proved of so much value and interest to him as that of which antipyrin is the type. Especially is this statement applicable to the diseases of infancy and childhood.

Originally introduced, as its name implies, as an antipyretic, antipyrin has in practice developed equal, if not more important, properties as a neurotic remedy. How this latter action is accomplished, or upon what theory the *modus operandi* is explained, has not yet been determined. Empirical observations have nevertheless established the fact that antipyrin and its congeners are among the most valuable and reliable nerve sedatives that we now have at our disposal.

In considering the therapeutic value of antipyrin in the diseases of children, it is not my intention to discuss the entire field to which its virtues may be applicable, but to present to the attention of the medical profession only certain diseases in which my experience has shown decided results favorable to this remedy. In this I am pleased to find my observations confirmed, in numerous instances, by many others.

The only disease affecting children in which I employ antipyrin as an antipyretic is pneumonia; either the croup-

ous or the catarrhal form. And even here I seldom resort to it, unless the temperature runs above 104° F., near the onset of the attack, inducing symptoms of nervous irritation, indicating a tendency to convulsive seizures.

The high temperature of pneumonia, whether in adults or children, is generally regarded as a dangerous element of the disease, on account of its supposed tendency to cause heart-failure from granular degeneration of the cardiac muscular fibre. This view may be correct as applied to a continued fever, as typhoid for example, but heart-failure in pneumonia is more rationally explained, in my opinion, by the continued strain produced from overcrowding and sudden dilatation of the right heart, the result of engorgement of the pulmonary circulation, when the area of lung, involved in the inflammatory process is extensive. This condition is best relieved by other means than antipyretics. The chief danger of high temperature in the pneumonias of children, in my estimation, is the production of an attack of convulsions, due to cerebral congestion; this latter condition being due to the poorly oxygenated state of the blood, thereby offering a highly susceptible condition for the convulsive seizure, through the effect of the fever.

It must not be overlooked that pneumonia is a self-limited disease, unless of the disseminated catarrhal form in children, and the less active interference with its natural course is employed; the better will be the results. Antipyrin, besides its antipyretic action, will allay nervous disturbance when not given too freely, and this point is of prime importance. I administer two and a half to five grains dissolved in water or suspended in syrup,—repeated every hour for four doses,—once in the twenty-four hours. I prefer, if possible, to give it toward evening, so as to secure sleep, which commonly follows as a result of its sedative action. Occasionally it may occur that the little patient is asleep before the time for the third or fourth dose has arrived. In such a case the entire dose is not given, as the sleep is ordered to be undisturbed.

I have never seen any but the very best results follow the use of antipyrin in the pneumonias of children when administered in the manner I have mentioned.

But my most marked success with antipyrin has been in the treatment of cholera. About one year ago my attention was directed to its employment in this disease, on learning of its use by Dr. Horatio C. Wood in his clinic at the

University of Pennsylvania Hospital. Chapin, in an article on Cholera in the *International Medical Annual* for 1889, reports a case presented at the above-named clinic, in which one week's treatment by antipyrin produced quiet after the case had just previously been for three weeks under the arsenic treatment without benefit.

My own experience in the treatment of one case of chorea in my clinic at the outdoor department of Mt. Sinai Hospital is fully corroborative of Dr. Wood's case. A girl twelve years of age, who had cholera with rheumatic symptoms, was treated for two months with arsenic and bromide of potassium, the arsenic being gradually increased in dose until she was taking seven and a half drops of Fowler's solution with fifteen grains of bromide of potassium three times daily. A part of this time iron and digitalis were also administered for a cardiac complication. The choreic movements, which were of the minor form, not improving, antipyrin in ten-grain doses, repeated three times daily, was given, and in four weeks all choreic movements had ceased.

This treatment for chorea has been used by me thus far in seven cases, two being still under treatment, with improvement. Of these seven cases, one was cured in one week, two in three weeks, the one above related, in four weeks, and one, the severest of all, in six weeks. The last was a case in a girl nine years of age, caused by chagrin at not receiving promotion at school, and was first seen on the fourth day of the attack, when the excursions were extensive and severe. Antipyrin in doses of seven and a half grains four times daily was ordered. At the end of the first week of treatment the movements were much quieter, although in the meanwhile they had been more severe than when first seen. About the tenth day of treatment an extensive urticarous eruption of a coppery color, unattended with itching, appeared over the face and body, and, in consequence, the number of doses was reduced to three daily. In two weeks the eruption had entirely disappeared. Complete cure was effected in six weeks. No other ill effects from the antipyrin, than the eruption, were manifested.

When we reflect that, according to the report of the collective investigation committee of the British Medical Association on chorea, which report was prepared by Dr. Stephen Mackenzie (*British Med. Jour.*, 1887,) and is based upon the returns of four hundred and thirty-nine cases, the

results of drug treatment, the favorite remedies being arsenic and iron, showed an average duration for the disease of ten weeks, the same duration being shown with non-drug treatment (that is, hygienic and dietetic measures only), I think we are warranted in granting a foremost place to antipyrin in the management of chorea. The average duration for the disease in my own cases was only four weeks.

Nineteen cases of chorea, two of which were very severe, have been treated with antipyrin by Dr. Jean Bouisson, of Lyon, France (*Lyon Medicale*, February 9, 1890). Eleven of these were completely cured and six greatly improved. The duration of the disease is not mentioned.

The close relationship of chorea to articular rheumatism in a large proportion of cases, as shown by the observations of Sturges, (*Archiv. Pæd.*, 1887), based upon an analysis of one hundred and seventy-seven cases, may, to a certain extent, explain the *rationale* of the beneficial action of antipyrin in chorea. Sturges concludes that chorea is only another manifestation of the same morbid condition as articular rheumatism, especially relating to the period of childhood. Other careful observers regard the rheumatic disposition as influencing fully one-third the cases of chorea, a smaller percentage being known as fright-chorea, due to emotional disturbances.

We must all certainly be acquainted with the fact that antipyrin has already secured firm recognition as a reliable remedy in the treatment of articular rheumatism, and it is most probable that its beneficial action in this disease may be explained on the principle of its antiseptic influence, the poison of articular rheumatism being undoubtedly the product of a fermentation in the stomach, depending upon some specific germ.

It would certainly seem that the antiseptic action of antipyrin is the correct explanation of its favorable effect in pertussis, and it may be interesting to note that it was with this view of the pathological origin of the disease, which was subsequently successfully demonstrated by Affanasiess, that it was originally introduced as a remedy by Sonnenberger.

For the past two years I have depended entirely upon antipyrin as a remedy in pertussis, and so far have seen no reason to change my practice. I have treated forty-one cases of pertussis, two being complicated with a degree of catarrhal pneumonia, with antipyrin, and all have recovered

in a shorter period of time, or the attacks lessened in number and severity, than previous cases under any former plan of treatment. Ordinarily, my plan in a simple case of pertussis is to administer from three and a half to seven and a half grains of antipyrin in syrup of wild cherry and water three times daily, according to age. Where pneumonia became a complication, the method of administration was changed to that before mentioned in the early part of this paper.

Many practitioners have no doubt met with cases of urticaria that have resisted the time-honored treatment of rhubarb and soda mixture, either alone or combined with bromide of potassium or many other remedies. To such I can confidently recommend the use of antipyrin, given either alone or in the rhubarb and soda mixture, or what is pleasanter, the compound syrup of sarsaparilla. Let it be distinctly understood that I do not refer to ordinary acute attacks of urticaria that will disappear under restricted diet alone, but to persistent cases that will continue in an intermittent manner for months in spite of arsenic and all other known remedies. In such cases I have found antipyrin to act with speedy relief.

Urticaria being a neurosis of the skin, we have here another illustration of the broad field of usefulness antipyrin possesses as a neurotic remedy.

To mention the highly beneficial effect of antipyrin in headaches and neuralgias would be repeating what is now an oft-told tale, but I find in my notes several cases occurring in children that have been relieved promptly, as in adults.

In conclusion, I would express the opinion that antipyrin is the type of the most useful remedy, with the broadest field for action, that has come to our notice since the introduction of chloral and carbolic acid.—*Archives of Pediatrics.*

Service of Dr. Robert W. Taylor.

ECZEMA.

Case 1. A freight-handler, thirty-six years of age, presented himself with a small patch of reddened, scaling and fissured skin in the palm of one hand, from which he said blood or serum occasionally oozed. There was a history of long-continued irritation of the part; but it was altogether unusual for

a lesion in the palm to remain so localized for so long a time. The condition at first suggested keratosis, but that was a simple thickening of the epithelium, while in this case there was also an inflammation involving the whole thickness of the skin.

The treatment consisted in the protection of the part from irritation, and keeping the hand as far as possible covered with an ointment composed of eight parts of diachylon ointment and one pint of balsam of Peru.

Case 2. This patient was followed by another one having a small, thickened, and somewhat pigmented patch on the inner side of the thigh. It was just at the part where the scrotum was constantly in contact with the thigh, so that moisture and dirt irritated the part. The occurrence of an eruption in this locality was suggestive of a parasitic disease, *e. g.*, ringworm or pityriasis versicolor. Ringworm generally occurred in a succession of clearly defined circles, increasing peripherally, and enclosing an area of more or less reddened skin denuded of hairs, or containing only imperfect ones. Small rings often formed within this. This form of ringworm was called *tinea circinata cruralis*. The term *eczema marginatum* has been applied to a condition in which ringworm was complicated with an eczema; and some years ago, Hebra and some of his followers had an animated discussion upon this point. Hebra considered it a peculiar form of eczema; but it was finally demonstrated to be only a complication of a parasitic disease. The two together were capable of giving rise to quite a formidable complication. Pityriasis versicolor sometimes extended down into this region. In the inguino-scrotal cleft it was quite common to find the tissues darker than on the surrounding parts, and this was particularly noticeable on the left thigh, against which the scrotum rubbed.

The treatment was very simple, and consisted in the observance of proper cleanliness and the liberal use of an absorbent dusting powder like starch, with the interposition of lint between the scrotum and the thigh.

PURPURA RHEUMATICA.

Case 3. Dr. Taylor then showed the class a man, thirty-two years of age, who had a very interesting eruption with a somewhat puzzling history. The patient stated that he had had a sore on his penis eight years ago, followed by a rash, and that a physician had told him he had syphilis. How-

ever, a careful and exhaustive inquiry failed to show any good grounds for believing that he had had syphilis. He had been attacked by acute articular rheumatism fifteen years ago, and after ten years' immunity from this disease it returned; so that during the past five years it had troubled him about every four or five months. The spots which were now on his body, he said, appeared regularly a day or two before the attack of rheumatism. At present he had pains in the knees, ankles, and elbow; one hand and knee were swollen; and the legs and arms were marked by hemorrhagic patches, which did not disappear on pressure. But besides this eruption, there was an infiltrated patch on the right buttock, partially covered with a horse-shoe shaped crust, and just above this were pigmented cicatrices marking the site of former ulceration. It was not at all uncommon, the lecturer said, for old syphilitics to be affected by articular rheumatism and rheumatic eruptions; but the patches on the buttocks were suspiciously like a syphilide. It should be borne in mind, however, that purpura hemorrhagica might give rise to ulceration. The hemorrhagic eruption was situated on the middle three-fifths of the leg, and the outer and inner aspects of the thighs, and on the forearms. Pressure had no effect on the spots, and the skin was somewhat thickened by the exudation of blood. The disease, purpura rheumatica, usually made its appearance first about the ankles, and quite commonly prior to, or coincident with, an attack of rheumatism. The exudation of blood which formed these spots underwent absorption after a time, leaving decided pigmentation. In this patient the buttocks showed the early stage of the eruption, and the limbs a later phase of it. Although the clinical history was sufficiently clear, the actual pathology was by no means well understood. It was thought that the rheumatism, by producing certain changes in the blood, gave rise to a tendency to the effusion of that fluid on parts of the body where the circulation was not very active, as upon the legs, or in situations subjected to pressure. There might also be some change in the walls of the capillaries leading to effusion of blood.

Treatment.—The treatment, of course, consisted in treating the rheumatic condition, by improving the hygiene, and administering the salicylate of soda.

PAPULAR AND PUSTULAR SYPHILODERM.

Case 4. The next patient, a man twenty-three years of age, who had had a hard chancre three months before, presented an admirable illustration of the large papular and pustular syphilide. The eruption covered face, body and limbs. This eruption was so peculiarly prone to ulcerate, that it was very common in public practice to find these patients presenting themselves with bandages on the forearms and legs.—*Medical and Surgical Reporter.*

Some Therapeutic Uses of Buttermilk.

THIS is the title of a paper by Stanley M. Ward, M.D., of Scranton, Pa., in the June number of the *Therapeutic Gazette*. He relates a case of Bright's disease reported by Dr. Henry D. White, in which no alleviation was brought about by the ordinary remedies. The patient finally, by her own solicitation, was given buttermilk, the use of which was followed by the happiest results.

Another case is related in which on several occasions the urine under heat and acid was almost solid in the test-tube. The ordinary drugs failed to give any relief. The patient began taking buttermilk, two quarts a day. Its effect being markedly favorable, the quantity was increased, and from this time the chief reliance was put on this agent, and the patient finally used from six to eight gallons a week.

Diminution in the quantity of urine passed, constipation and headache followed invariably if the supply of buttermilk became exhausted; and, finally, an examination of the urine, made one year and nine months after the first observation, the patient during a great part of this time having been engaged in his usual avocation, revealed the fact that minute quantities of albumen were still present.

He speaks of its use in stomach affections, the principal symptoms being eructations and vomiting. In cholera infantum the stomach may often be quieted by interdicting everything else, and using a few drops of fresh ice-cold buttermilk at intervals, ranging in length according to the severity of the case.

We have used buttermilk in our practice since the fall of 1881, as a therapeutic agent—food or drink, we hardly know which. When an acid was craved by the patient, and lemons were not on hand, fresh, cool buttermilk was ordered,

with the instruction to begin with a tablespoonful, in case of an adult, every hour, and gradually increase the quantity to a gill every two or three hours, unless some untoward symptoms developed, such as nausea, colicky pains, diarrhoea, etc. In the autumn of '81, we had a typhoid fever patient who could retain neither food nor medicine. (Typho-malarial?) It was the second week of his sickness; there was rather severe bowel complication, with hemorrhage, irritable stomach, and he was in a semi-comatose condition. When aroused, he would call for buttermilk. It was the twelfth day of his sickness, and death seemed inevitable unless something could be done to quiet the irritable stomach, nourish the patient, and satisfy the craving (and as we thought abnormal) appetite. Sweet milk, pure, and prepared in various ways, together with various foods and slops, (beef tea, etc.,) had been tried, and were repulsive to the patient before and after taking—disagreed with him. In our extremity we directed that a tablespoonful of buttermilk be given every fifteen minutes until we called again in an hour. At the expiration of that time no unfavorable symptoms having developed, the quantity of milk was quadrupled and given every half-hour, until another call was made in four hours. At this visit the patient was much refreshed, rested better, and there was less of the low muttering delirium. During the after-part of the night the nurse on watch went to sleep, and the buttermilk in the quart cup was left in reach of the patient, and he took advantage of the occasion and drank what remained, fully one pint at once, with good results. The amount was gradually increased, and the fifth day after he began the use of the buttermilk he drank one gallon, and continued to drink a gallon a day for the next ten days. While he gained but little if any weight, he was much better every other way. Owing to the excessive work put upon the kidneys and lack of nourishment in the buttermilk, a few tablespoonsfuls of cream were added on the fifth day with a view of decreasing the quantity of fluid and increasing its nutritive value.

Four tablespoonsfuls of cream mixed with one quart of buttermilk, and the milk given as before, produced nausea and anorexia. The cream was withheld, and the buttermilk by the next day was relished and agreed with the patient. After a number of days, one and then two tablespoonsfuls of cream were added to the buttermilk, and it was tolerated; finally one-half pint a day was given, and the

quantity of buttermilk was reduced to one-half gallon a day. He relied upon this fluid food for about six weeks until complete recovery; although he was tempted with and given food of various kinds, he retained a relish for buttermilk.

The buttermilk craze is on, and while the physician must not lose his head, it is a safe rule to utilize agents within the reach of all, both as a food and a medicine when they meet the indications, and never despise the day of small things, and the use of common things.—*Kansas Medical Journal.*

The British Medical Association.

MR. T. HOLMES, in treating the subject of Surgery of Large Arterial Trunks, spoke of the material for the ligature. Silk, catgut, ox aorta, and kangaroo tendon were alluded to—the speaker giving his preference to kangaroo tendon for ligature in continuity, and to catgut, properly prepared, for tying divided vessels. He held that the value of tying the artery so as not to rupture the internal coat was as yet undecided. Abernethy's plan of double ligature, with division of the artery between, was disapproved of, but regret was expressed that no surgeons who practiced it were present to speak from experience in favor of it. Secondary haemorrhage from ligature in continuity had become extremely rare, and might be expected to remain so, while with Abernethy's method there was always the risk of the ligature slipping. In reference to the reintroduction of Anel's method of ligature for popliteal aneurism, the speaker considered it to be a retrograde step. In almost all cases the Hunterian method was proved to be successful; while in the remainder, the method of Antyllus, provided an aseptic course could be obtained, appeared to be preferable. On the subject of secondary haemorrhage, the prevention was a more practical point than the cure, as it should be of very rare occurrence; but for cases where it did occur, Mr. Harrison Cripps' conclusions were supported—namely, for urgent cases, either renewed ligature or amputation; in haemorrhage slowly coming on, probably from the distant portion of the artery, careful pressure and bandaging. In the discussion which followed, the speakers—Mr. Bennett May, Mr. Page, Mr. Damer Harrisson, Dr. Marcy, of Boston, U.S.A., Dr. Parkes, of Chicago, Mr. Pritchard and Mr. Bartleet, President of Section—generally supported Mr. Holmes in his

conclusions, it being agreed that perfect asepsis was of the first importance, and that, if it could be obtained, the material of the ligature and other details need not much affect results, for many successes had been recorded under the most varying conditions of operative detail.

Mr. E. Atkinson read a paper giving an account of five successful cases of Nerve Grafting, with restoration of sensation, after an interval of from thirty-six hours to eighteen days after operation, motor power being in all cases recovered somewhat later. Healing by first intention was not necessary, for in one case suppuration and sloughing around the graft had not interfered with its vitality.

OBSTETRIC MEDICINE AND GYNÆCOLOGY.

The President, Mr. Thomas Savage, in his opening remarks, said he had two duties to discharge—to offer a hearty welcome to the members of the Association to Birmingham, and to express his acknowledgments for the honor done him in placing him in the chair. He referred to the large and varied amount of material which was to be brought before the section, and thought that before long a subsection of Gynæcology, apart from Obstetrics, would require to be established. He referred to certain conditions of practice where the obstetrician would require to call in the surgical gynæcologist to perform abdominal section, and the necessity of defining the special fields of the obstetrician and the gynæcologist. In referring to the question of insanity in gynæcological practice, he thought that every lunatic asylum ought to have a skilled gynæcologist on the consulting staff, as cases of insanity are recorded in which, when the uterine system is attended to, the insane symptoms are improved or entirely removed. In four hundred and eighty-three cases of ovarian extirpation in his own practice, four cases became insane, thus showing the effect of the generative system upon the brain functions. Some other points were brought forward, rather as questions for future consideration than as dogmatic opinions, which he could not, as President, bring forward for discussion.

After the President's brief address, Dr. W. S. Playfair opened a discussion on Modern Methods of Managing Lingering Labor. This is, he said, a subject of practical importance and interest to all practitioners. He purposed considering the changes which have of late years been made in the rules which should be followed in certain constantly

recurring difficulties, and to contrast the practice of to-day with that of our predecessors. Some of the topics would naturally be very briefly considered, and his opinions and practice might not receive general acceptance. "In what respects, then, do the views of 1890 differ from those of thirty-five years ago? The one idea at that time was that interference was suspicious, that 'meddlesome midwifery' was bad, and, as a consequence of this teaching, protracted deliveries, with subsequent protracted convalescencies, were the rule. The tendency to-day is, perhaps, in the opposite direction, but it is the duty of the practitioner to avail himself of every means in his power to ensure his patient a short labor with minimum suffering, provided the means adopted are such as are in themselves not injurious. What may be done in rigid cervix?" Extracts from the text-books of the day were given to show that labor was not considered as even tedious unless it had lasted twenty-four hours; "but now we recognize that the mere wear and tear of delay is a serious thing in itself. Structural causes need not be considered, as these require special treatment; but we must notice lingering labor due to simple non-dilatation, in which chloral is useful, inertia of uterus, premature rupture of membranes, or to over-distension of uterine walls. In the early days, procedures at variance with modern practice were recommended: thus bloodletting, tartar emetic, hot baths, etc., were now put into the limbo of obsolete remedies. Opium was advised, but when given in sufficient quantity it temporarily arrested the pains altogether." The modern practice in the prolonged second stage, the head being in the pelyc cavity, and the labor simply delayed from uterine inertia, was then considered, the two most important changes being the almost entire disuse of oxytocic drugs and more frequent use of the forceps. The former frequent employment of ergot was illustrated, and its entire prohibition in the chief lying-in hospitals at the present day was shown. The author then described the employment of pressure on the uterus, illustrating this by the customs widely prevalent among savage tribes. Its indications and the scientific method of using it were then considered. Finally, the frequent application of the forceps in the present day was contrasted with the practice in the early part of the century; for instance, in the Dublin School of Midwifery, between 1826 and 1833, of 16,654 cases, the forceps were only used in twenty-seven cases, whereas the

operation of craniotomy was performed one hundred and eighteen times. At the present time, in the Rotunda, the forceps are used once in one hundred and sixty-five cases. Now few deny that with timely interference by the forceps little risk to the mother or child is run. Dr. Playfair stated his inability to give definite rules for their application, every case being required to be treated on its merits, especially noting the effects of the pains.

An animated discussion took place. Dr. Walker expressed surprise that no reference was made to the occipito-posterior position as a cause of delay. Dr. Bell (Glasgow) spoke of the use of strychnia prior to confinement, of chloral, and gelseminum. Dr. Laurence recommended the use of hot douches for relaxing the genital tract, and of ergot in small doses, combined with chloral, to bring back normal uterine contraction. Dr. M. Cameron related his experience of large doses of opium in lingering labor. He objected to pressure, but strongly advocated friction. Mr. Donovan said he had great confidence in quinine. Dr. Cullingworth said that the disposition to interfere in the first stage was the result of the anxiety of inexperience. He considered opium to be the best remedy in the lingering first stage, and useful in diminishing irritability of the uterus, and the suffering of the patient where this was connected with inefficient uterine action. Mr. Wright referred to the local use of cocaine in midwifery practice. Dr. Napier noted three essential points to consider in lingering labor—the safety of the patient, her comfort, and the practitioner's inclination. He spoke of the value of antipyrin in fifteen-grain doses in tardy labors. Dr. Benington expressed his appreciation of the binder applied during the progress of descent. Dr. Edis drew attention to the fact that the child ought to be considered. Dr. Gordon, from America, asked what was the value of the voluntary muscles of the second stage. Dr. Smyly (Dublin) related the present teaching at the Rotunda Hospital. Dr. More Madden advocated the use of large doses of ergot, either by the mouth or by hypodermic injection, in uterine inertia. Dr. A. J. Smith drew attention to the necessity of watching the condition of the child. Dr. Byers spoke of the necessity of antiseptic precautions in all cases. Dr. Playfair briefly replied.

Dr. A. H. F. Barbour handed in a paper on Recent Results from the Study of Labor, especially of the Second Stage, by means of Frozen Sections and Casts. He demon-

strated the sections and casts, made of gelatine and glycerine, showing the value of this method of investigation. The sections showed, amongst other important points, the disposition of the peritoneum, the position of the bladder before labor begins, and during the second stage, when it becomes partly a pelvic and partly an abdominal organ. He pointed out the seat of the "retraction-ring" dividing the genital canal into an active and passive portion. The casts of the foetus showed the elongation of the body to be due to the extension of the spine and the degree of flexion of the head. Dr. Berry Hart thanked Dr. Barbour for his important contribution, which might be regarded as the most interesting that had ever been made to scientific midwifery. Dr. A. Wallace drew attention to the fact that in the case where the woman died with the child lying on the perineum, the arm of the foetus was lying below the chin, preventing complete flexion of the head taking place.—*London Lancet.*

International Medical Congress.

Special Correspondence of the *Philadelphia Medical News*. Tenth Annual Session held at Berlin.

THE International Medical Congress was called to order in the Circus Renz, by the President, Professor Virchow. The beautifully decorated hall held five thousand representatives from all parts of the world, to whom Professor Virchow extended a most hearty welcome. In his opening address he called attention to the great advances in medicine, and to the value of international meetings in uniting the medical world in the struggle against disease and death. He further said that the object of medical associations should not be to get more pay or shorter hours, but to increase our ability for research, and to diminish the dangers that surround humanity. He expressed the Emperor's sympathy with the objects of the Congress, and said that Germany would devote herself to science and humane efforts.

Secretary Lassar reported that five thousand delegates were present, two thousand five hundred of whom were foreigners. Of all countries the United States takes the lead, with five hundred delegates. England follows with three hundred. It was announced that there were seven hundred papers to be read in the three official languages, namely, English, German and French. This report was followed

by addresses of welcome by Herr von Boettscher, German Minister of Education, and the representative of the Chancellor; Herr von Gossler, Prussian Minister of Ecclesiastical Affairs; Herr von Fordensbeck, the Mayor of Berlin, and by Dr. Graf, President of the German Medical Association. On behalf of the American delegation, Surgeon-General Hamilton thanked the Germans for their great hospitality; Sir James Paget tendered the thanks of the English delegates, Dr. Bouchard those of the French, and Dr. Bacelli then spoke for Italy, in a delightful Latin oration, that charmed the hearers and demonstrated that the dead language united all scientists. Tremendous applause proved how well the oration was appreciated.

The following Honorary Presidents were then announced: From the United States, John S. Billings, M.D.; Austria, Professor Billroth; England, Dr. Stokes; France, Professor Bouchard; Italy, Dr. Bacelli; Germany, Carl Theodore, Duke of Bavaria, who, though of royal blood, is a distinguished surgeon. Professor Virchow was made the permanent President and Dr. Lassar the permanent Secretary.

Sir Joseph Lister then read a paper entitled "The Present Position of Antiseptic Surgery," in which he referred to Metschikoff's brilliant experiments in regard to the destruction of bacteria by the amoeboid cells of living tissue, and showed how small particles of septic material are destroyed by leucocytes. He said that the work of Tait and Bantock is not opposed to the principles of antisepsis, but, on the contrary, that their cleanliness, and care in the preparation of instruments, sponges and dressings, show how well they follow the laws of antisepsis.

He believed in the use of strong antiseptic washes in all surgery except that of the peritoneum, where we should use solutions not stronger than 1 to 10,000, and in synovial membranes, where 1-to-4,000 solutions are proper. The spray, he said, has no real value, and he hopes that the day may come when we will need little irrigation and no drainage. Floating particles in ordinary air, he thinks, can be disregarded. He recommended the double-cyanide gauze as the best dressing.

Dr. Robert Koch, the famous discoverer of the tubercle and cholera bacillus, followed with a paper on "The Present Status of Bacteriological Science." He thinks that the future will give us fixed ideas of the etiology of all infectious diseases, be they bacterial or not. He believes that species

of bacteria are fixed, and that one form can not develop into another. In bacterial examinations he said that we must never depend on one characteristic, but should exhaustively test all the qualities. He described a new bacillus, very similar to that of tuberculosis, but showing slight differences, and though it had puzzled the author of the paper, it is now established that this new form is a distinct species which causes chicken tuberculosis. It seems now that the exanthemata are not due to bacteria, but, perhaps, to some organism similar to the plasmodium maliaræ; but long and patient work and culture experiments must decide this point. The results of bacteriology are comparatively slight so far, but if the apparent results of his present work are true, bacteriology will be a greater science in the future. He has a new remedy by which he can check tuberculosis in the guinea pig, and can prevent even inoculations from affecting the animal; he did not say, however, what the remedy is.

Tuesday was devoted to the work of the sections. In the section of Internal Medicine the treatment of chronic nephritis was the main theme. An absolute milk diet and the administration of little medicine seemed to be in the opinion of all present the proper treatment.

The treatment of tubercular peritonitis by laparotomy was discussed very fully. No one seemed to have a clear idea of how a cure takes place after abdominal section, although, according to the reports, cure results in thirty to sixty per cent. of the cases. It was therefore thought that laparotomy is the best therapy if a diagnosis can be positively established. In the acute miliary form operation was, of course, considered of little value.

Terillon reported his results in resection of the stomach and intestine for carcinoma. His present position is that, although so far no operation has resulted in preventing a recurrence of carcinoma, the patient's comfort is so much increased and his days so much lengthened that it is our duty to give him the benefit of an operation.

At the second general session, Sir James Paget and Dr. John S. Billings presiding, it was decided to hold the next meeting of the Congress at Rome. The official records show an attendance of five thousand five hundred and sixty-one members. Of these there are six hundred and twenty-three Americans, four hundred and twenty-one Russians,

three hundred and fifty-three English, and one hundred and seventy-one French.

Professor Bouchard, of Paris, then spoke for two hours on the "Mechanism of Infection and Immunity," and was followed by Axel Key, of Stockholm, on the "Relation of Puberty to the Diseases of School Children." Key has found that the year of greatest growth in boys is the seventeenth; in girls the fourteenth. While girls reach full height in their fifteenth year, they acquire full weight at the age of twenty. Boys are stronger than girls from birth to the eleventh year; then girls become superior physically to the seventeenth year, when the tables are again turned and remain so. He stated that from November to April children grow very little and gain no weight; that from April to July they gain in height but lose in weight, and that from July to November they increase greatly in weight but not in height. These are the results of over six thousand observations. During the school months children suffer far more from disease than in the vacation, and during school years far more than before or after. Key thinks that usually school work is far too hard in the lower classes, and that the children do not get sufficient muscular strength. Less school work and more physical training until the twelfth year are necessary to make our coming generation strong; and a child should not undergo any severe mental labor.

This is a splendid exhibition of medical and surgical appliances, in which all nations are represented. The place of the special sessions is the famous Art Exposition buildings, and no International Congress ever met in more beautiful quarters. The arrangements are perfect, and one hears nothing but praise from all foreigners. Very differently were the Americans treated who attended the British Medical Association, in Birmingham—over fifty withdrew their credentials on the second day, and nearly every American member resigned. The Americans are intensely indignant, especially so at Mr. Lawson Tait. Further details concerning the action of these delegates will be sent in time for your next issue. Tuesday evening the city of Berlin gave a magnificent banquet to the foreigners in the city hall, and Wednesday evening there were banquets by the different sections. The delightful weather adds not a little to the enjoyment of the meeting.

Microscopy.

THE following "microscopical notes" we have clipped from *Meyer Brothers' Druggist*, a drug journal published in St. Louis. H. M. Whelpley, M.D., Ph. G., is editor of the Microscopical Department in the *Druggist*.

RINGING MOUNTS.—For preventing the finishing cement from running under, I have been using a solution of gelatin and gum arabic, about sixty grains of each to the fluid ounce of water and colored with some anilin dye. In using it, ring a narrow band of it around the edge of the cover glass and allow to dry; when dry it is ready for the finish. It is best to apply two or more coats of the gelatin and gum solution so as to ensure complete covering for the resinous medium. Having tried it for some time, it seems to be satisfactory and does very well. Since paraffin has been recommended for the same, I have tried it, and it as good, but requires quicker manipulation. Paraffin is the best substance for pure carbolic acid cementings, as all other cements are dissolved or softened by phenol.—J. E. HUBER, PH. G.

MICROSCOPICAL EXAMINATION OF POWDERS.—By Hans M. Wilder, in *American Journal of Pharmacy*. **Powders.**—Considering the number of histological elements of varying specific gravity which constitute a drug when powdered, and considering the small amount of powder actually present in a "mount" (seldom more than one-half to one grain, generally less), it will be evident that a single slide rarely, if ever, fully represents the drug. It will be necessary, therefore, first to insure the thorough mixing of the powder (either by shaking of the container or by triturating a portion in a mortar), and, secondly, to make about a dozen slides, the examination of which will bear out the above statement. Once, on examining powdered Alexandria senna, the writer made twenty slides before he found the middle layer of the fruit pulp, for an illustration of which see *Proceedings A. Ph. A.*, 1882, page 240, E.

Medium.—For casual examination almost any liquid will do. Besides the time-honored water and more or less diluted glycerine, the writer finds sweet oil, old essential oils, and especially liquefied carbolic acid, of great service as clearing

media; a concentrated solution of chloral hydrate clears nearly as well as the latter substance.

Mounting.—If the powder is tolerably uniform in fineness and quite dry, so that it does not cake, a very cleanly way of mounting is to follow Mr. A. P. Brown. Breathe upon a slide, press it down on the powder, and rap the slide smartly with the edge on the table, so as to get rid of the superfluous powder, when the remainder will be found distributed quite evenly on the slide. The writer now puts on the cover glass, places on top a small weight (a conical rifle-bullet, for instance), brushes off the excess of powder, and adds one or more drops of the medium next to the cover glass, when the fluid, if not too viscid, will quickly run under by capillary attraction. This does away with the otherwise inevitable "messing," and comparatively few (sometimes none) air bubbles will be noticed.

In order to make a typical slide, since very seldom a single slide contains all the characteristic elements, the latter must be transferred from several slides to one of them, unless one prefers to keep three or four slides of the same powder.

Comparison.—In order to get a powder of undoubted purity, it is certainly best to powder the drug one's self, and since the volatile parts are of no consequence microscopically, sharp drying will much facilitate the powdering. The pharmaceutical microscopist ought to be sufficiently familiar with the microscopical appearance of the more important powdered drugs to be able not only to recognize them at once, but also be able to state that such and such other elements (tissues) do certainly *not* belong to the drug in question. Whether he is able to tell what these foreign substances are, will depend on his familiarity with the usual impurities and adulterations; it is manifestly impossible to be acquainted with everything that might be present in a powder.

Gleanings.

TOOTHACHE.—The *Progress Medical* credits Guild with a method of treating carious toothache by means of a mixture of equal parts of crystallized carbolic acid and flexible collodion, which is to be carried to the bottom of the cavity. The pain is said to disappear instantaneously.—*Ex.*

I HAVE used *Campho-Phenique* for some time past in my private practice, and at my clinic at Beaumont Hospital Medical College, and am very much pleased with its action as an antiseptic anæsthetic surgical dressing. I have had the most excellent results with it in caries and superficial necroses, using it pure, or dissolved in various proportions of oleaginous matter. Suppuration was controlled, the removal of sequestra facilitated, and recovery hastened in a remarkable manner. In short, I may say that I consider it the most valuable of all the additions of modern chemistry to surgical therapeutics.

DR. WALDO BRIGGS, St. Louis.

APPOSITION MATS IN INTESTINAL ANASTOMOSIS.—At the meeting of the Medical Association of Alabama, Dr. John D. S. Davis, of Birmingham, read a paper on this subject: The mats are made by coiling a large catgut ligature four times, so as to have an oval opening of any dimensions, and held in position by four ordinary catch forceps, until the mat can be woven by means of a needle threaded with a small catgut ligature.

The apposition catgut mats can be quickly and easily made for encircling any size aperture desirable. When completed, the mats may or may not be pressed to flatten down the small interwoven catgut ligature to render the surface smooth.

The mats retain their integrity, and do not warp. The threads are secured by passing a needle, threaded with silk suture, through the mat, between the first and second inside catgut ribs, and fastened by returning the needle so as to inclose in the loop one or two of the threads used for weaving the rings together.

Dr. Davis' experimentation with apposition catgut mats in intestinal anastomosis have been highly satisfactory. They are quite as absorbable as Senn's decalcified bone plates: more easily and quickly made; as readily applied, and have the advantages for securing the threads for coaptation that can never be attained in the attachment of the coaptation threads to the bone plates when the bone plates are not on hand for use; the making of them, or sending to distant cities for them, would be a serious delay. As the catgut mats can be quickly made of any desirable size, serious delays are obviated.—*Virginia Medical Monthly*.

Book Notices.

THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA.
Embracing the Botany, Chemistry, Pharmacy and Therapeutics of New Remedies. Being the Results of the Collective Investigation of New Remedies, under the "Working Bulletin" System, Properly Arranged, Classified, Indexed and Placed at the Disposal of the Medical Profession. Detroit, Geo. S. Davis.

During the last ten years a mass of pharmaceutical and therapeutical knowledge of the newer materia medica has been gathered from many and varied sources of botanical and pharmaceutical information, clinical reports, physiological researches, reports from special botanists traveling in the habitats of many of the more important of the newer drugs, etc., much of which has already been published in the form of "working bulletins," but all of which is now to be arranged, classified, indexed, and eventually placed at the disposal of Medicine and Pharmacy, in book form.

Each remedy mentioned in the foregoing list will be treated in an impartial and purely scientific manner, giving, as far as possible, in the order named:

The botany of the drug.

Names, synonyms, natural order, origin, history, commerce, production, description, microscopical structure, etc.

The chemistry of the drug.

Composition, analysis, etc.

The pharmacy of the drug.

Adulterations and substitutions; pharmaceutical preparations; incompatibles, etc., etc.

The therapeutics of the drug.

1. Reports of experiments made upon animals to determine the physiological action of the drug.

2. Clinical reports, pro and con., published in medical periodicals, etc.; arranged with reference to the diseases in which the drug has been tested, or with reference to the nature of its action upon the human system.

3. Resume by a competent physician, giving the indications, antagonists, synergists, physiological action, toxicology and antidotes, dosage, etc., of the drug as established by the

reports of clinical and physiological investigators above mentioned.

In order to properly carry out this programme, the work of compilation, editing and revision, indexing, etc., will be under the charge of a bureau of competent physicians, botanists and chemists, and no pains will be spared to secure conciseness and accuracy.

It was at first intended not to present the work to the profession until entirely complete, so that it could be offered in book form. Realizing, however, that some time would elapse before it could be finished in this shape, and that the information would be of value as fast as completed in parts, we have decided to issue monthly, uncut sections of the volume, each of which will embrace so much as is finished up to the date of its issue, and which has not been published in a section previously issued.

When complete these sections may be bound to suit the taste of the owner, or we will receive them in exchange for a bound copy, if the subscription has been paid in advance.

As near as we can estimate, the work will be complete in a volume of about eight hundred pages, and we hope to be able to furnish the bound books within twelve months.

The price of the work, when bound in cloth, complete, will be three dollars.

The subscription price for the parts, to be forwarded as fast as issued, will be for the set two dollars. Inasmuch as we shall hold ourselves ready to exchange a cloth-bound volume for the complete parts, if the subscription has been paid in advance, this is practically a discount of $33\frac{1}{3}$ per cent.

Address all communications concerning this work to GEO. S. DAVIS, Publisher, Detroit, Michigan.

Correspondence.

A High Degree of Hypermetropia.

BY DR. TIFFANY, OF KANSAS CITY, MO.

F. T., American, age twenty-five, gray eyes, of Eudora, Kas., consulted me February 21st, 1890. Examination revealed one of the highest degrees of hypermetropia I have

ever seen. The optic nerve and retina, with their blood-vessels, could be easily seen without a mydriatic, at a distance of four or five feet from the eye. The antero-posterior axes of the ball measured less than 20m. m., while the greater diameter of the optic disc measured less than 5m. m. There was a slight physiological cupping of each disc. Vision of the right eye was $\frac{20}{120}$. Vision of the left $\frac{20}{120}$. With a +4.50 or 8 D., the vision of either eye was brought up to $\frac{20}{120}$. There was convergent strabismus of both eyes; 6 m. m. of the right, and 4 m. m. of the left. I prescribed these strong glasses of +4.50, which the patient is wearing with satisfaction and comfort. With them he can see to read the finest print. They have entirely relieved him of the ciliary neuralgia or temporal headache of which he complained, and for which he mainly consulted me. The strabismus, by the use of the glasses, is also being corrected. The main points of interest in the case, as they appear to me, are, the extreme high degree of hypermetropia, the alternating concomitant squint, same amount of vision in either eye, the extreme shortness of the eye-ball, the small disc, and the tolerance of so strong a glass.

Editorial.

THE CONTRACT RAILROAD SURGEON.—The editor of the *Journal of the National Association of Railway Surgeons* in an editorial, in a recent issue of that journal, undertakes to defend those medical gentlemen who contract with railroad companies to render whatever professional services they may require of them for the pitiful compensation of an annual pass. The editor himself may believe that he has brought forward some most powerful arguments in defending a class of men whom the majority of physicians believe are degrading the profession by their course—arguments so strong that no one will be able to answer them—but we are of the opinion that he has damaged the cause of those whose cause he wished to advance and relieve of the odium that has been cast upon it. But we will quote some of his unanswerable arguments:

“1. It may be pretty safely affirmed that, as a rule, railroad surgeons themselves are satisfied with the compensation they receive.”

Of course, they will all assert that they are *highly satisfied* with the compensation they receive. The fact that they fill their positions is evidence of their satisfaction. A certain doctor that we once knew, who received the munificent salary of \$75.00 a year for rendering all the medical services required by a society of three hundred and fifty members, was satisfied with his compensation. If he had not been he would not have accepted the position. Of course not.

"2. There is a large amount of instruction to be gained by the observation and treatment of acute railroad cases by an observant man; surgeon's skill and readiness are largely enhanced, and consequently his surgical reputation is increased, by the treatment of a large number of cases; in certain localities, particularly in small places, the name of 'railroad surgeon' doubtless brings considerable general practice."

If a poor devil of a doctor should be called in to attend a member of the family of a railroad president, a millionaire, (especially if he is a millionaire ten or twenty times over) he should, we presume, consider himself adequately remunerated by the "honor and glory" that would result by having been selected as a medical adviser to *such a family*. We know a case to the point. Several years ago the very rich president of the Baltimore and Ohio Railroad became insane. For a while he was shut up in a private lunatic asylum. But after a time it was concluded to take him on a trip around the world, and an accomplished young physician of Baltimore was engaged to accompany him, being familiar with his case. When they arrived in Berlin the doctor, tired out by his onerous duties, concluded to resign his position and return home. On announcing his intention, he was paid money enough to pay his return passage, for which he gave credit on account. When the crazy president reached his home the doctor presented the family, or guardians, a bill for, if we remember right, \$5,000. Payment was refused, the bill being regarded as *exorbitant*. Why exorbitant? The doctor had given up a paying practice to attend upon the lunatic, and made other great sacrifices. But, we suppose, it was reasoned that the "honor and glory" of the position he had been holding was a fair offset, and more than a fair offset, for his sacrifices. The doctor entered suit for his bill, but as we never heard the result, we presume that it was concluded to pay his bill.

We have never been able to discover the advantage resulting in rendering medical services for nothing to "swell" railroad presidents, or to "swells" of any kind. They should be compelled to pay for professional attendance the same as a poor man. We always charge them a full bill.

"Now, if the medical profession of a community find one of their number doing a certain class of work below living rates, the part of wisdom is to let him go on doing the work and starving on the proceeds."

So we say; but honorable physicians who esteem their profession, can have no respect for a person, calling himself a physician, who is engaged in doing all he can to degrade the profession in the esteem of the community. He should not be consulted with or admitted into any medical societies. It is such fellows who keep fees down to less than living rates. A lawyer will charge and be paid \$5,000 for writing a rich man's will. If a physician, however, charges this same man of wealth \$100 for saving his life, he will be charged with an attempt to rob him.

"3. Probably the greatest agitation of this question is made by those who would be railroad surgeons if they could secure the appointment.

"4. As to the railroad corporations themselves, it may be said that they are under no legal obligations whatever to furnish surgical treatment for their injured men; and, if they consider it for their interest and for the interest of humanity to employ competent surgeons for a fixed compensation, to attend their injured, they have an undoubted right to purchase that service at the lowest market rate."

The arguments, numbered by the editor 3 and 4, are the final arguments offered by him justifying physicians selling their services to railroad corporations for annual passes over their roads. He undoubtedly considers them unanswerable, and we agree with him. As regards the statement in No. 3, we will state that we were never a candidate for a place as railroad surgeon. Though for twenty-five years we have been well acquainted with railroad men holding high offices, we have never intimated to one of them that we would accept a position on his road in a professional capacity for an annual pass either in part or whole payment.

We agree with the editor that railroad corporations are under no *legal obligations* whatever to furnish surgical treatment for their injured men. So also when a certain man went down from Jerusalem to Jericho and fell among thieves,

who stripped him and wounded him and left him half dead, neither the priest nor the Levite who came along and looked upon him, while he lay on the roadside, were under any *legal obligations* to help him, but all the same, they were sent to hades for their inhumanity, where no doubt they still are.

That the profession at large have no interest in the subject of medical men rendering services to rich corporations for a trifling compensation—that it is none of their business—is not true. Such conduct concerns every honorable man who practices medicine for a living. It is distinctly stated in the Code of Ethics that, however wealthy a physician may be, however able he may be to render medical services without remuneration, he has no right to prescribe or treat any one professionally for nothing, except the poor who are not able to pay him.

Men are valued as they value themselves. If a physician's fees are very low, the public, who are used to paying full value for everything, naturally conclude that they are worth but little. Attorneys charge and collect large fees, and have but little trouble in doing so. Why? Because they have taught people that their services are valuable. A rich man sends for an attorney to write his will, and is charged from \$1,000 to \$5,000, which he pays without complaint. But if this same man gets the bones of one of his limbs crushed in a railroad accident, so that to save his life an amputation of the limb has to be made by a most skillful surgeon who has expended years in hard study to qualify himself to perform such operations, and sends in a bill for \$250 for the operation and weeks of attendance, old moneybags makes a great outcry and declares that the learned and skillful surgeon is endeavoring to swindle him. If you attempt to reason with him and argue that as the surgeon had to devote years of study to qualify himself to properly perform the services for him he had rendered, and, therefore, should be paid for it, he will put an end to your arguments by pointing to the fact that Dr. Smith, the editor of the *Journal*, performs twenty such operations every year, besides a vast amount of other surgery, for a certain railroad, all for an annual pass over the road, and consequently it is foolishness to declare that such service is of any particular value.

But we must adjourn the subject to another time, as our space will not permit to write further.

THERAPEUTIC PROGRESS.—Quite a number of new anti-pyretic analgesics and hypnotics have been brought to the attention of the profession during the last few years. Among them are exalgine, antipyrin, antifebrin, exagine, phenacetine, acetanilid, pyrodine, thallin, sulphonal, chloralimid, somnal, amylenhydrat, urethran, etc.

Exalgine derives its name from the most important of characteristics—its power of relieving pain. It is sparingly soluble in cold water, quite soluble in hot water and in water to which a little alcohol has been added. It is without taste or smell. Physiologically, it is closely allied to acetanilid and antipyrin; its effects on the sensorium are, however, more marked, while its antipyretic powers are less, depressing the temperature 1 to 3° C. The dose is 4 to 6 grains two or three times a day. All forms of neuralgia are said to be benefited by it, including visceral neuralgia, and it sometimes relieves where antipyrin and antifebrin fail. It antagonizes convulsive symptoms and checks polyuria. It produces no gastro-intestinal irritation, no rash or cyanosis, but occasionally causes slight vertigo and tinnitus. The system becomes habituated to its use. In fatal doses, it appears to paralyze the respiratory centre. It is eliminated by the kidneys, diminishing markedly the urinary secretion.

Bardet, of Paris, says that isomeric bodies are being sold as *exalgine* which are not that drug, and are therapeutically inert. Caution should be used in order not be imposed upon.

Among hypnotics, *sulphonal* has continued to exact a large share of attention and research. When it was first introduced to the notice of the profession, great hopes were entertained that at last an ideal hypnotic had been found. For a time the reports were almost without exception favorable, but as time wore on they became less and less so, and it can now be said that this agent has fallen much below the position which it occupied when we last met. In noting the accumulating unfavorable evidence, the editor of the *Therapeutic Gazette* (Dec. 15, 1889,) says: "The testimony as to the inconveniences, and indeed almost the dangers attending the use of sulphonal, is so rapidly accumulating, that it is evident its field of usefulness is becoming greatly restricted." Among the drawbacks to the use of the remedy are its expensiveness, its insolubility, the uncertainty of the dose and effect, the slowness of action, the persistency of the hypnotic effect, cumulative action, and unpleasant and even

dangerous sequelæ. Among the toxic effects reported are vomiting, faintness, tinnitus, vertigo, headache, muscular ataxia, tottering gait, excitement, delirium, delusions, cyanosis, pulmonary congestion, collapse. These ill effects were usually seen most after large or repeated, but also sometimes after small, doses, and death has followed a moderate dose. It is difficult to avoid the conclusion from the contradictory reports that there must be great variation in the composition of the drug, and that toxic principles must be present in some preparations and absent in others. To a considerable extent, doubtless, the ill effects may be obviated by restricting the dose. Ordinarily, this should not exceed ten or fifteen, or, at most, twenty grains, and remembering its cumulative effects and the slowness of its elimination owing to its insolubility, in case of repetition the dose should be diminished. In practice among the insane, however, all experience proves that less than 30 grains is useless.

We are indebted for these facts to an article by Dr. Eugene F. Cordell, of Baltimore, which appeared in "*Notes on New Remedies*," but contributed to, we believe, the *Maryland Med. Journal*.

WOMAN'S SCHOOL OF PHARMACY.—The Louisville School of Pharmacy will begin its seventh annual session September 30th. It is a pioneer in the work of educating women as chemists and pharmacists, and the only institution specially devoted to this work. It has an able corps of instructors, and a complete and well-equipped pharmaceutical and chemical laboratory. Its course of instruction is thorough. Its graduates rank high in their profession, and their services are sought for as assistants in first-class pharmacies and chemical laboratories. We are informed that there have been more applications for graduates during the past year than the total number licensed since the opening of the school. Its regents and faculty give all assistance in their power to earnest students in limited circumstances during their scholastic course, and in obtaining situations after graduation, and also the necessary pecuniary assistance to those who show an aptitude for and a desire to enter business on their own account. Full information and catalogues can be obtained of Dr. Wiley Rogers, Secretary of the State Board of Pharmacy of Kentucky and Professor of Pharmacy in this institution, or Dr. J. P. Barnum, Dean.

PROSTITUTES.—Tarnowski says that the study of prostitution leads him to the conclusion that women who are prostitutes belong psychically and physically to the degenerate class, that they are the product of inherited disease and neurotic taints. The making of the prostitute depends upon alcoholic excesses, syphilis, phthisis, etc., and to relieve society of prostitution, one needs to attack these vices of modern society. Prostitution, according to the book of Dr. Tarnowski, is not so much the result of man's uncontrollable sexual passions as it is of society's vices in general.

Criminalologists find that men commit crimes four or five times as much as women do. The inference that man is five times as criminal and vicious as woman is denied by Tarnowski, who finds that prostitution in woman belongs to the same category of ethical defects as crimes; that female thieves are of the same class as female prostitutes, and that prostitution so levels the criminality that the balance between man and woman is an even one.

Professional prostitutes, it is stated, show a morbid heredity more or less marked. Alcoholism was especially noted, being present in eighty-two per cent. In fifty out of one hundred and twenty-four, both parents were drunkards. Among one hundred and fifty prostitutes, ninety-five admitted excesses in alcohol. Phthisis was abnormally frequent among the parents. Among one hundred and fifty prostitutes, forty-four had parents who died of this disease, while among one hundred and fifty honest women only fifteen had phthisical ancestry. Hereditary syphilis was established in four per cent.; epilepsy and mental disease were established in over ten per cent. of the parents.

It was also found that prostitutes present in excessive degree the physical signs of degeneration, such as cranial deformations, abnormalities of visage, dental defects, badly shaped and badly placed ears, etc. All these stigmata are more marked in cases where the mother was an inebriate.

Mentally the prostitute also shows an enfeeblement of the intelligence, and especially of the moral sense. Most of them like their calling, and if withdrawn from it they return as soon as they can. They were found to have menstruated earlier than the average woman, to have shown a premature development of the sexual sense, and, like the degenerate classes generally, to be relatively sterile. Among one hun-

dred and fifty prostitutes, ninety-two had been infected with syphilis.

Despite all efforts to elevate and improve the masses, the number of prostitutes will constantly receive new recruits, says Tarnowski, as long as the causes of it exist; viz., the abuse of alcohol, the enfeebling diatheses, phthisis, syphilis, and the grand neuroses and psychoses. Those who would attempt the radical cure of prostitution must work to lessen these factors in its causation. The prostitute is a special and morbid type of humanity—the result of its vices, not of its necessities.

A NEW BACILLUS.—A recent candidate for bacteriological recognition is that found in hailstones and certain rain-drops. Its pathological significance has not yet been determined, but it is supposed to take an active part in the production of cyclones. Some of our neighboring cities are offering handsome prizes for a germicide which will annihilate this active micrococcus.—*Memphis Journal.*

LIABILITY TO CONCEPTION.—According to the Mosiac law a woman is *unclean* (in a religious sense) during menstruation and until eight days after it has ceased. Consequently it was held to be an impiety for sexual intercourse to be indulged in between husband and wife during menstruation and during the eight days of cleansing. Many medical men, however, are of the opinion that conception is little likely to result from intercourse at other times than just before menstruation occurs and immediately after its cessation. These professional gentlemen seem to overlook the fact that there are no more *fruitful* people in the world than the Jews. Though many of the Jews of to-day may give but little observance to their peculiar laws, yet this can not be said of those who lived a few centuries ago, and especially of those who existed previous to the Christian era; and yet, from the time of their origin, have they been noted for their rapid increase under favorable circumstances.

We have been led to make these remarks from seeing a paper contributed to *Memorabilein* by Dr. Schneider, of Oppeln, who, undoubtedly in writing it, did not have in mind any of the traits of the Jewish people. The subject discussed by him was on the most favorable time for conception, maintaining that the general view that just before or after menstruation woman is most likely to conceive, con-

trary to the fact—that the genitals are so strongly affected by menstruation that they can not possibly be equally favorable to conception before and after the same. It has also been proved by Dr. A. Gusserow that the ovum, which has just left the ovary, is destroyed during the menstruation; so that conception immediately afterward is impossible. Menstruation is, according to the author, due to the sterile ovum acting as an irritant foreign body on the inner surface of the uterus, or to the relaxation of the uterus, which takes place in consequence of the relieved congestion of the genitals, and results in the loss of the decidua menstrualis with the necessary hemorrhage. This bleeding can not possibly take place before the ovum has arrived in the uterus, as the fructified ovum could not otherwise adhere. It has, on the other hand, been proved that conception has taken place at a greater or less period before menstruation, and the author mentions some cases, that have come under his observation, of conception occurring after coitus that took place two weeks after the beginning of menstruation. The author concludes as follows: The premonitory symptoms of menstruation appear not more than four days in advance, and denote the bursting of the ovarian follicle, after which the ovum begins its migration through the fallopian tube; if it is not fructified soon after its arrival in the uterus, menstruation appears in about twenty-four hours. It has also been proved by experiments that spermatozoa retain their vitality within the genitals for eight days; so that the liability to conceive lasts twelve days. It is, however, probable that this liability is of shorter duration under abnormal circumstances; when, for instance, menstruation appears every two weeks, it is likely that the liberation of the ovum takes place nearer this period than the above mentioned four days, and the vitality of the spermatozoa will likewise not be so lasting. Other influences may limit the liability to conceive considerably, but the extreme period is certainly twelve days.

JEFFERSON MEDICAL COLLEGE.—We are informed that the Faculty of the Jefferson Medical College, Philadelphia, have in contemplation the enlargement of their building, and have secured several properties fronting on Walnut Street, west of Tenth Street, for this purpose. The proposed improvements will be made at once, and the addition, when finished, will be used for class-rooms, operating rooms, clinics and library.

THE PRACTICE OF MEDICINE IN THE STATE OF WASHINGTON.—The Legislature of the new State of Washington has passed a bill for the appointment of a Board to examine persons proposing to practice medicine in the State, as to their qualifications, and to license such as have been found qualified. The bill, as first passed, provided that the Board should be chosen by the Governor exclusively from the ranks of the regular profession, but we understand that the Governor vetoed the bill, for the reason that the homeopaths protested against it, on the ground that they, who formed about one-eighth of the whole number of medical men of the State, would be treated with manifest injustice by it.

The Governor having returned the bill to the Legislature unsigned by himself, that body again passed it, but amended by the objectionable features being left out. The Governor then placed his signature to the document, first announcing, however, that he would, in appointing a Board, give the regulars a minority representation upon it instead of appointing them exclusively, as was first contemplated by the Legislature. He, therefore, appointed four regulars, three homeopaths, a "physio-medic," and an eclectic. The regular physicians, consequently, who composed five-sixths, or even a larger proportion, of those who practiced medicine in the State, constituted *four-ninths* of the Board.

It was anticipated that a portion of the Board would be composed of homeopaths, and there were no objections to it, but the profession consider that they have been insulted by the appointment of a "physio-medic." That class of "doctors" have never been known to represent anything but ignorance. "Physio-medicism," "vitapathy," "clairvoyance," and the methods of healing of the negroes of the South imported by them from the "dark continent," are all the same in principle, and have an equal right for the respect of intelligent people who are of the opinion that there are *Schools of Medicine*, and that each one of them possesses more or less merit. If there were many ignorant negroes in the State of Washington, we presume that the Governor would have a "voodoo" on the Board, considering that that system of healing should have a representative.

At the first meeting of the Board the "irregulars" combined and elected a homeopathist president; and, it is stated that, without reference to his medical beliefs, he makes a

very good presiding officer. A rule was adopted that a general average of sixty-five must be made by all but old graduates (of at least five years' standing), who need not average as high in chemistry, physiology or anatomy as graduates of less than five years' standing. The examinations were held July 1st, at Walla Walla, ten men presenting themselves as candidates for license to practice medicine in the State. They all passed but one, a homeopathist, who had graduated in March last. There were one hundred and fifty-six questions—five each on Diseases of the Eye and Ear; ten each on Medical Jurisprudence, Surgery, Histology, Preventive Medicine, Practice, Diseases of the Nervous System, Anatomy, Materia Medica and Therapeutics, Diseases of Women, and Diseases of Children. On Obstetrics there were eleven questions; on Chemistry fifteen, and on Physiology twenty. On Materia Medica there were two sets of questions, one for the homeopathists, and one for the regulars. The other *schools* would have been accommodated if they had solicited the favor, but they did not solicit.

The questions were given the candidates in the handwriting of the members of the Board by whom they had been prepared. One of the candidates carefully copied all the questions, and, in some instances, the spelling also. We will quote a number of those prepared by the "physiomedic," that our readers may see the great injustice perpetrated by the Governor upon the profession of medicine by giving a seat upon the Board to such a fellow, as being a physician, entitled to represent a *school*, as though there were *schools* in medicine. We have only space for a very few, as follows:

"What is *pertusses*?" "What does delayed dentition prognosticate?" In Diseases of Women he questioned upon "*leucarrhæa*," "*amenarrhæa*," and "*dysmenorrhæa*." Other questions were "Define *mamory absess*," "What is pelvic *absess*?" The last question was upon "*lacerated peroneum*."

The eclectic asked the candidates to "name the divisions of the abdominal *aorta*, large branches, and from where does the lower extremities derive their blood supply?" Another question was, "What's the *perentory* condition of *pepsin* in the stomach?" It was afterward found that he considered the correct answer to be "Hydrochloric Acid." Another of his questions was, "What's the effect of *too much red corpuscles* in the blood?"

THE
CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 273. } SEPTEMBER, 1890. } VOL. XIX. No. 9.
 Old Series. } New Series.

Original Contributions.

Overstrain and Underpower of Brain.

BY C. H. HUGHES, M.D., ST. LOUIS, MO.

In the days of our ancestors, when our grandfathers, and perhaps even the fathers of some of us, obtained their education mainly during the invigorating days of winter, when the season was unpropitious for the plough, and their school-houses were built of materials which their own hard hands had hewn from the forest, over mental strain from too much study was but a mythical possibility, and under power was one of those fabulous gods of the imagination for which their incredulous heads and hands provided no Pantheon. Their organisms were hardened and strengthened to their surroundings by ample sunlight and fresh air, pure, plain food (well relished), timely and undepressing recreation, and ample rest after each day's work for mind and body.

Luxury did not lurk in the backless seats of the average district log school-house of those early days, with its wide open fireplace and its walls chinked with mud, which mischievous boys often picked out to further ventilate the school-room.

From these primitive school-houses the scholar often went home hungry, for he not only studied his books, but helped to cut the wood and make the fire that kept him warm, and to sweep the school-room, but he seldom went home with the headache of a vitiated atmosphere or the pangs of a nervous dyspepsia.

Our fathers were men of power. Our mothers, too, were like them; at least, the mothers and fathers of those of us who have survived to maturity with reasonably good

constitutions, the ordeals of school and social life in our large cities.

Like their brawny arms were our fathers' brains. They rejoiced in surplus of power. Over brain-strain from over-study was to them a stranger and a myth.

Conscious of strength which had never been overtaxed, they had but to dare in order to do, and they had that pluck to undertake great enterprises which comes of conscious power. They realized no finite impossibilities to mind.

The *ennui* of sedentary vocations and constant indoor occupations seldom troubled them.

Compelled to be physically more reliant than the men of our time, and living of necessity more in accordance with the just demands of nature, they bequeathed to their children plucky maxims in regard to the capabilities of mind, beyond our power of successful execution under our changed environment.

To them all things were possible to mind, because they had not realized, as many of their descendants have, how feeble the mental powers are, without a strong brain and body to support them. *Mens sana in corpore sano* had no such realistic meaning to our fathers as has been forced upon us. True, the possibilities of the human mind are as yet immeasurable, and may reach, for all we know to the contrary, to the very mind of the Infinite; but these possibilities are only possible to us through a more circumspect and less prodigal use of all our powers than our ancestors displayed. We must save ourselves for our brains, and save our brains for our mind's sake.

The morning newspaper did not come each day to our fathers before they sat down to breakfast, to make its early demand upon the organic neural force and abstract power which, in some organisms, should all go to the stomach at that time of day.

Our fathers went to bed with the set of sun, or, if the dim tallow-dip or fagot-light prolonged their hours of vigilance, no brilliant gas or dazzling electric light could then, as now, make sleep a stranger to their eyes till the return of the next morning's sun; or if, perchance, they fell asleep, as indeed they scarce could help, even with the weightiest matters of their day on their minds, under the unstimulating household lights of their times, no telephone aroused them from their peaceful slumbers and no dreams of Wall

Street ventures—of bulls or bears or fluctuating stocks of any kind—startled them into premature unrest before the break of day. The terrors of Wall Street insomnia haunted not their tranquil sleep, nor did the “ticker” and the phonograph combine to wear them out by day.

The news of the whole world did not come to them as it comes to us now in a single day, to keep their brain-cells in ceaseless activity, only to end in sudden stoppage of the heart through an inadequately-rested, constantly overtaxed and finally paralyzed nervous mechanism, failing first in cortex or base of brain; or a weakened and broken brain-vessel or blood-clot detached from the walls of a feeble, enervated heart, and lodging in the brain so as to stop as quickly as the click of a heart-valve the machinery of thought and motion, just as a particle of dirt within its machinery stops the movements of our watches. Railroads did not rob time of its diurnal periods of rest in their day; the crossing of the Atlantic within a week or circuit of the world in a few months were not possibilities of their time.

Our fathers did not sleep on the go and go in their sleep as we do. The typical fifteen minutes for refreshments was unknown to them, and at home they took time to rest in going to and from their meals and places of business, because they went in their own conveyances or on foot instead of the cable or elevated rail car or the steam coach, and they were not striving after an electric motor to jostle their digestions and help them to go faster through the world. In short, environments then imposed conditions of rest from too constant brain-strain, which were in accord with the demands of nature; they ate and slept and rested like their horses; eating temperately of plain food in the daytime, and retiring physically wearied by honest toil at night.

Our fathers lacked, and they did not require, the wisdom of self care, that we must have in order to survive, if duty's demands in our time are answered.

With all the added stimulants to over-mental activity about us, which did not press upon our fathers, it is a possibility and a certainty (unless we are wiser than they were) for us to run our race much more swiftly and perish sooner than they could have done under the mental pressure of their time. Their environments conserved their powers, ours tend to destroy. The necessities of existence imposed upon them more personal physical effort. They did largely

a divided mental and physical work, and they could not if they would, so readily run all night and scarcely note the fleeting hours as we can. We have reached a time when, in view of the many influences about us tending to accelerate our mental movements, it seems far less figuratively than heretofore, to be but a step from the cradle to the grave. Most of us are willing and are probably anxious to go to heaven when we die, but most of us, I think, want to keep out of the grave as long as we can.

Over-pressure is the power which bears us there. How may we have the power to resist this pressure to the farthest natural extent? The problem of life is in this question, and the problem of health upon which depends the power of body and mind is involved in it likewise.

Health depends upon organic power, and organic power depends on health. The wider and deeper the view we take, the farther and clearer we see that the question of over mental pressure is a relative one to organic power. It is a question of the relation of mind to organism and its environment, and upon its correct solution in the light of all that we have learned or may yet know of the functions and laws of mind and its subservient or governing organism, the brain, allied nervous system and whole physical body, will depend our capacity to so care for the mind, under all the pressure it may be called upon to sustain, that it may not fail through under-sustaining power. For whatever may be the real nature of mind, which thus far no eye has seen or glass has reached, it is so intimately allied to organism as to be practically inseparable from it in life. A blow upon the head may derange its manifestations for life; a subtle poison like alcohol or opium or hashish introduced into the blood which circulates through the brain may temporarily change or permanently destroy the mind's identity.

An inhalation, as of protoxide of nitrogen, amyl-nitrite or ozone, ether, chloroform or carbon-dioxide may exalt, depress, pervert or suspend the mind's functions. An obstructed vessel, a tumor's pressure or a blow on one part of the brain, may suspend the memory of facts or of words, or of time or power of speech alone, without loss of words, or arrest, alter or destroy the perceptive powers, without always deranging the reasoning faculties or destroy or cripple special or general power of motion, leaving the intellect *intact*.

Ferrier, the great neurophysiologist, of England, with insulated electric needle placed, now on one convolution and now on another, of a monkey's brain, and causing the monkey to make, at his master's bidding, chattering noise or execute prehensile walking, climbing or other movements of the muscles of the body; touching certain centers of the brain surface and making the monkey's face to express surprise or fear and other varieties of facial expression of mental states, together with the physiologically demonstrated selective affinities of certain drugs for special parts of the brain and spinal cord, illustrates what science has done to show how wonderfully like a marvelous machine of man's making the mental machinery is, and the same experiments show that this finely-adjusted mechanism, more delicate apparently than that of the most perfect and complex mechanism of Geneva or Elgin by which we time our hearts-beats and count the fast-falling footsteps through the little span of time allowed us for our life-work here, is far more difficult to derange than any mechanism of man's contrivance that even approaches it ever so distantly in delicacy and complexity and perfection of movement. The nature of the human organism in its finest parts is hardy and adapted to endurance, capable of withstanding great abuse and violence from without and self-inflicted damage from within, and of repairing great injuries if allowed a reasonable chance. Its power of self-repair, which we call recuperation, or the act of recovering lost power or the *vis medicatrix naturæ* of medicine, distinguishes it markedly from all mechanisms of man's making. But, like the machinery of human workmanship, it is best repaired at rest. If given the same attention to its physical needs as the engineer gives to the proper working condition of the machinery that carries us fifty miles an hour through space, it would work with equal accuracy through its allotted period of time and carry us less suddenly than both now do, into eternity.

We live in a social and business atmosphere of excitement, and our physical environments are rather stimulating than restorative.

We make provision for action, always action, in our social, political and educational organizations, and reform and progress and never rest are our constant watchwords; and yet our frame is so constituted that adequate rest is one of its chief organic needs and essential preliminaries to

progress. "Tired nature's sweet restorer, balmy sleep," is not courted as she ought to be. "Sleep! balm of hurt minds! nature's second course! sore labor's bath! Sleep, that knits up the raveled sleeve of care," and compensates the waste and wear and worry of our mental life, is too much ignored in all of our arrangements for work of mind. Our amusements and recreations, too, are mainly provided for during hours which were best devoted to rest and sleep.

To us the night cometh not now, as in the ancient days, when no man can work; night with us, when the brain ought to be at rest, has become the chief time of action. At that part of the day when the heart-throbs should be lessened and the over-taxed organ allowed a little repose between its beats, its pulsations are accelerated to meet the imperative calls for blood, of an unresting and unrestful brain whose ideational cells and percipient centers are kept in ceaseless activity by the demands of late school work, midnight committee meetings of merchants, manufacturers, manipulators of markets and managers of "the machine" of party politics. To these we add the neural prod and whip and spur of artificial alcoholic (and even tea and coffee) stimulation at the wrong time of day, when an inclination to repose and not overaction of the nervous system and mind should be encouraged.

The man or woman who, in this age of demand for action, sleeps and feeds inadequately and works on, is destined to break down or die prematurely; and if the demand of tired nature for repose and repair be unwisely and cruelly answered, as, alas, it too often is in our time, by the goad of artificial stimulation, the end comes suddenly in those startling brain breaks which now too often abruptly sadden hearths and homes that might have had happiness for years had wiser self-management prevailed in the household head and beyond the homestead; but in this great world of action the light of great actors on the world's stage goes out as suddenly as a shut-off gas jet. Great mental suns are eclipsed in the twinkling of an eye, and while it ought yet to be day to them, from neglect of such precautions and care of self as the Humane Society exacts for our horses.

Within a few short years the land has been draped in mourning for an ex-president and greatest general of the age, dead from over mental strain, because he knew not how to

rest his brain at a time of life when nature demanded more repose than he gave it. It is said that he died of cancer, but before the cancer was the shock of Wall Street and its financial disgrace and irreparable reverse of fortune, just as before the cancer that killed Napoleon at St. Helena was Josephine divorced, Europe lost! over which the star of his brilliant, restless, wicked destiny had but lately shone as if it might never set in the dark and overbearing retrospective anguish of his exile.

The nation scarcely gets over its mourning for a great general whose name during the late war was as familiar as the Potomac, dead too soon for lack of rest, and another who in his life was as brave as the bravest of Gettysburg, and who will be remembered till the history of Southern reconstruction shall be forgotten, whose physique gave promise of a longer lease of life, before another brave military chieftain prematurely falls and a vice-president drops dead suddenly, because his heart nerves, descending from the head and upper part of the spinal cord, were deprived by ceaseless activity of that power which comes from adequate rest, to keep the heart going. He heeded not the warning of a previous brain-failure which demanded judicious rest as the condition of subsequent moderate integrity of function.

The life of a late actor of great promise and power goes out in mental fatuity and general paralysis from self-preventible causes, associated with physical unrest. Another swoons, but not in play upon the stage, of heart-failure, beginning in the head. And I might name here another who might yet have charmed the world for a quarter of a century with his inimitable personations, whose doom is sealed by alcoholic over-pressure added to the sustainable strain of his avocation.

The ruin of the histrionic profession is in the unrest and vicious indulgences that additionally exhaust the brain of its members in the intervals between the plays, when nature cries for rest and recuperation of power. And I may add, this is the chief sin and reproach which attaches to the modern legitimate drama, as it is called.

One of the greatest financiers of the present day drops dead of heart-failure, due to over brain and nerve-strain, during a business conversation. Killed by his own hand, snapped out by his own imprudence at a time of life when his father had only begun some of his most successful finan-

cial manipulations in the monetary world. He had not a constitution hardened to mental endurance like that which the rigid environments of his father's youth had made for him.

Another scion of a greater ancestor, inheriting millions of money and the presidency of a great trunk line, now lies mentally prostrate, at a time of life when the father, like the great Vanderbilt, was just in the zenith of his power.

Two prominent and powerful pulpits of our city were but lately draped in mourning and congregations grieving and would not be comforted because of loved ones taken from them by a sudden apoplexia; and these two dire calamities might, by timely and judicious rest of their sad victims, have been averted.

The lesson of those sudden break-downs is obvious. They are nature's violent penalties—her capital punishments for over brain pressure and neglected rest. If epitaphs always gave the causes of death, those upon the tombstones of most of our great men of the present age would read something like this:—

“Dead because of resisted or neglected sleep.”

“He stimulated when he ought to have slept.”

“He fell prematurely because he never rested when he could help it.”

“While he lived he was always wide awake.”

“He never waited for the next train.”

“He was ever on the go, and now he's gone before his time.”

“He was always in a hurry, and went away too soon.”

“He was a hustler in his day, and went away early.”

“His sun set while it was yet day.”

“Ambition broke him in his prime.”

Not indeed that all use alcoholic stimulants, but by all the excitants of brain action man can devise, his poor brain breaks down when it ought to be in the very prime of power. There seems to be a sort of morbid pride, like the suicidal manias which sometimes sweep over the land, displaying itself in the wish of some of our best and hard-to-be-spared men, “to die in harness,” like an over-driven horse. But what sense, to sensible people, is there in this foolish idea?

How much better to work longer, if a little slower, as in the course of nature we approach the grave, and finish up our work here without startling *denouement*, and more

leisurely wrap the drapery of our couch about us and calmly die like one who lies tranquilly down to pleasant dreams.

Overwork over-strains and weakens the nervous mechanism which holds intact the circulation of the brain; the vasomotor system of nerves, as it is called, is more or less paralyzed, and congestion and abnormally quickened circulation of the brain results in insomnia with insanity and paralyses as consequences, especially the general paralysis of the insane, or paresis. Alcoholic stimulants act in a similar manner; or brittle changes, by earthy depositions in the strong elastic coats of the arteries, technically called atheromatous degeneration, take place in the vessels of the brain, with advancing age, as was probably the case of the late John B. Gough, whose impassioned oratorical climaxes and dramatic manner put upon the blood-vessels of his brain the extremest possible tension. He was too old for that style of oratory. Heart-failures (so-called) of our great men of large affairs are generally head-failures from over-pressure and under-power, the latter from lack of adequate daily recuperation, just as their dyspepsias are. How can heart or stomach prosper in such organisms when their cormorant brains, continually demanding more nerve force and never resting, constantly rob these lower organs so intimately associated by nervous connections and dependent upon the brain for force?

Ceaseless mental activity after a time overtaxes the cerebro-spinal axis and sympathetic nervous system, the centers of power for intellection and for the propulsions of organic life. The gastric juice that dissolves the food taken into the stomach is diminished through defective nerve influence, in quality and quantity, and a slow or difficult digestion goes on in the stomach, though its source is in the head. Hogs never have dyspepsia, and you may load the tranquil-minded laborer, who works willingly with his hands all day long, to the full, and he will labor with his load, be it ever so large, to a successful completion of digestion. Dyspepsia is the badge of the brain-wearied and over-worn by the over-pressure of work or vigils hard to be borne and of the comparatively unrested.

The pneumogastric nerves and their sympathetic connections sustain the functions of heart and stomach, and in part, that of the lungs and liver, and when these lower organs begin to fail in brain-workers, nature is protesting, just as she does in the neuralgias, headaches, and slight

disorders of sensation and motion which are the oft precursors of brain break-down. It is then time for the prudent to take warning and begin the work of restful repair. Let us care for our bodies as we would care for our houses, and not live long in them with leaking roofs and cracked foundations, foul drains and damaged food supplies. No system of education or scheme of brain work is safe for the organism, that fails to provide for adequate recuperative rest; and successful schools should look to the manner in which recreation seasons are spent by pupils, and see that the proper times of repose are not partly spent in exhausting activities that give under-power in lieu of physical restoration. We are too much and too long on our feet or in our chairs, and too little on our backs or recumbent; the upright position taxes the heart more than the recumbent. The heart is an accommodating and responsive organ; it beats fast or slow within certain limits according to the demand made upon it for blood by the brain. Ordinarily it beats seventy-two times to the minute when we are sitting in mental repose. If we get up and walk about or run, or if something greatly agitates our minds, its beats increase to eighty, ninety or more (rarely in a healthy person), to a hundred and twenty, which is ordinarily a fever pulse. Alcoholic stimulants have the same effect.

Eight hours out of every twenty-four should be devoted to recumbent repose, woman for obvious reasons requiring a little more than man, seven and a half to sleep and half of each day to rest, relaxation and recreation, sleep and meals; and sleep and rest should be mainly in the night-time, while the remaining twelve hours could then be given mainly to vigorous mental or physical work, which is more than the average work, mental or physical, which man now gets out of his organism under the present irregular, exacting and artificially stimulating methods. We have largely turned night into day and come to despise, because we are too sleepy to enjoy, the early morning sun and the vigor in his rays. Some of us never see the novel sight of a sunrise, except during our vacations, when we get up late and we are shaken up earlier than is our wont. (I mention the shortcomings of our sex because gallantry forbids special reference to yours, but since Eve first misled Adam in Paradise, the hygienic as well as moral *faux pas* of the sexes have been about equal and mutual.)

You may point your own moral from our shortcomings and make your own application.

We shall not have lived in vain if we have served or shall serve as a warning to the gentler sex to beware of over-pressure, and the causes that lead to under-power to sustain the strain of life's mental and physical burdens. I do not say that we should in our habits of life go back to the back-log and log cabin of our fathers or to the spindle and distaff of our mothers. We could not do so if we would, for we have passed beyond that in the onward revolution of human progress; but I would bring back to our homes and habits of life, the health-giving influences and surroundings of those days, the quiet evenings, the early-to-bed and early-to-rise habits of the past, and substitute the eventide meditations and mental repose at night-time of the quieter past for the excitations which gas-lights and electric illuminators, telephones and palace sleeping cars make possible at the present time. Physically, at least, we live more uprightly than our fathers and mothers did; that is, we stay up later and longer every day. We are living upon the capital, physical and moral, which they have bequeathed to us. Are we adding anything to our inheritance? Others are to receive from us, or have received from us, as we have inherited from those who have preceded ourselves, to fight the battle of life and sustain its physical and moral duties. We are not yet permanently degenerated; we are simply over-pressed and over-strained, not beyond our possible capacity, but above our powers, unconsummated. We have a lesson to learn which our ancestors did not have to study, because no such demands were on them as are on us—the lesson of how to provide for the highest possible degree of human endurance, and notwithstanding many shall fall by the wayside and in the battle's front from lack of the requisite knowledge timely gained, which is power to endure, we shall, as a race, learn and profit by the lesson, and the fittest will survive. We have not yet reached the beginning of the end of our career.

The glories of a brilliant future of unsurpassed grandeur in great and glorious achievements opens on our view, and awaits only the judicious training of our powers, and the conservation of our developing energies, before we and our children may take possession. The human organism is pliant and buoyant, and while, unlike any other machine, it

may set in motion forces of its own which can destroy it; it also, unlike all other machinery, has a singular power of self-repair. We need take no pessimistic view of our mental future if we study how the organism conserves itself, and give it a fair chance while demanding the paying-out of its powers in education.

With all the strain which an advancing civilization imposes on our minds and bodies, we have been enabled, through the improved methods of protection from the effects of physical exposure and the spread of epidemic diseases, to so nurse what is left of our physical heritage as to prolong the average duration of human life. The same progress made in the direction of developing organic power in the growing period of life, will save and prepare our children for deeds of mental endurance far beyond our own strength. This knowledge is indeed the highest kind of power, and this power is knowledge. Let the pride of our young men and women be in their strength of body and brain, to sustain the display of mental power in purity and beauty. This is the true moral æsthetics. The courage to successfully prosecute high ideals of mind and heart is sustained and assured by organic endurance and power. While it is possible for the machinery of the adult mind to work well twelve hours out of every twenty-four, this amount of work is over-pressure to the average mental organism now, with the generally uninvigorating, if not positively depressing, manner in which, at least, a part of the remaining hours are usually spent by brain-workers. This amount of work is not habitually possible under the drawbacks of improper food, dyspepsia, bad ventilation disregarded, late hours, the midnight club, the morning german, night stimulation and study, the dissipations generally of both moral and immoral living, unsuitable clothing and insufficiently sunned bodies. We should sun and air our bodies as we do our bed-clothing and bed-chambers. Human bodies and brains, like plants, need good soil, sunlight and fresh air, and a time of rest for perfect development and power. If we turn from ourselves to our children, the factor of growth in them is to be considered in addition. They are in the most active period of physical and mental life. Power for daily expenditure to supply the demands of education must be secured to them from their environments, and power to become in them latent in brain and bone and muscle, and every vital organ, for future expendi-

ture, must be drawn from the soil about them, which is the air they breathe, the food they eat, the clothing they wear, the houses they live and rest in, and the sun that shines upon them, the recreation they receive and the moral atmosphere that surrounds them. The pressure the matured organism sustains with impunity is over-pressure in the young, and if borne at all it will be sustained at the expense of development and a stunted and pigmy immaturity, which will bear the marks of over-pressure and under-power for life's demands to a premature grave. There is a transition period, too, from childhood to youth when the pressure of study should be especially light or taken off altogether. A long vacation from all over-straining study about the period of puberty is not lost in either boys or girls, but well repaid, in the end, in a physique that fits for the sustenance of far greater physical and mental strain, than if the unremitting pressure of school-life had been endured at this period. My own opinion is, that to not letting up of school-pressure for a while at this period more than any other one thing besides, is due the lessened stature and physique of our graduates from the great academies compared with their parents generally. The gale that the sturdy oak in its prime withstands, and that breaks the old tree in its decadence, bends down and dwarfs or uproots the sapling. We should be careful not to bend too violently or too often the growing tree, lest we should interfere irreparably with its fullest development. It is fortunate for the human race that the young school sapling has been so well endowed by nature for resisting over-pressure, even at the expense of developing stature. Had it been otherwise, the human race, under the inconsiderate goading processes of modern educational methods, which have largely ignored the child's organism, and the manner in which it has been cared for both in and out of school, would have much more enfeebled it than it is now. Education has tended to draw out about all the reserved vitality that nature could supply the growing organisms of our children, leaving little surplus for exuberant physical growth.

Education should develop the organism. A student should quit school stronger in capacity for bodily as well as mental endurance than when he or she matriculated. This means a developed mind with power to sustain its severest demands. I do not mean that a student should have the muscles of an athlete or the agile powers of a gymnast, but

the frame and physical powers should not be so deteriorated after the completion of an educational curriculum as to make physical expansion, under circumstances demanding it, an impossibility. Muscular power should exist in kind if not in quantity. Responsive capacity to developing influences should not be destroyed in the organism by over mental pressure. True education of brain should develop both the motor and the psychical areas of the brain—the places where the power that governs and excites the physical movements of the body as well as the centers where the faculties of the mind and soul dwell and work.

The sanitary condition of our great cities, the healthfulness of the streets, in respect of sunlight and pure air our children play in, is of equal importance with the sanitation of the school-room, for if they can not have the parks and fields for play-grounds, they should play and romp in the streets.

It should be remembered, that whereas our remoter ancestors were largely an outdoor people, we are greatly an indoor people; even when we go abroad, from city to city, or State to State, or from our homes, on business or pleasure, on the street or railroad cars. Those of us who in our childhood climbed great hills or walked long distances to school, find our children objecting to walks of half the distance, and thinking it a hardship if they are not transported by horse power or machinery. The multiplication of conveniences of travel and mechanical substitutes for labor makes physical degeneracy easy and physical labor uncongenial to us and our children. Physical apathy is as much a vice to be shunned as those vicious indulgences of appetites that deprave organism and rob it of vital stamina. We need not seek to emulate Hercules or Heenan, but we can not have the highest capacity of brain-power associated in an absolutely incapable muscular system. The muscular system must be exercised, in every scheme of education, so at least as not to lose its capacity. The energetic man or woman who spends a reasonable time out of doors, and ignores the too habitual and exclusive use of carriage, street car and elevator, will receive muscular exercise enough to maintain health, if the proper balance of physical and mental exertion has been maintained in the developing period of childhood, youth and early manhood or womanhood.

Dr. Hertel, health officer of Copenhagen, in his instruct-

ive studies of the sanitary condition of the school children of Denmark, found among a class of children well fed, clothed and housed from inclemency of weather, the following state of facts: His inquiries were begun at the close of the summer holidays, after the children had been well rested from the pressure of the preceding school term. During the holidays their appetites were generally good, but they lost appetite during the school season. Of 3,141 boys, sixty per cent. he regarded as healthy, thirty per cent. unhealthy. The remainder were not reported to him. On beginning school, seventy-four per cent. of the same boys were healthy, and eighteen per cent. sickly, but before one year's schooling had been given them, the percentage of sickly children had doubled. This is a fearful ratio of increase of ill-health to be set down to Denmark school-life, and the seed of a vast harvest of confirmed valetudinarianism to be reaped by these innocents later on in life, when bodily and consequent mental health will be more valuable than minds early matured in the multiplication table or mimicking the really great in a robust knowledge of the *belles lettres*, arts and sciences; when all the educational acquisitions of a lifetime would be willingly exchanged for a return of the lost health and vigor. No burden is so great to bear or so cruel to bequeath, as the knowledge which the education gives of the beauties and treasures of learning, if, with the bestowal of her gifts there dawns upon the mind the painful consciousness of physical incapacity to enjoy them and a paralysis of force which makes it impossible for the disappointed victim of over mental strain to walk further in the enchanting paths of culture and the flowery fields of true refinement. To be weak here and now is to be miserable indeed. It were better the paradise had never been presented to our view, than that it should only be seen to reveal to us what we might, but now can not, enjoy. In Copenhagen, Hertel found, that on entering school, one boy in every five was sickly, and after a year's attendance, one boy in three was more or less a physical failure. Suppose this vicious process of education goes on there with those boys' children and their children's children, what will finally be the fate of Denmark if the county schools pattern after, and do equally destructive work with, the educational establishments of the city of Copenhagen?

"At a meeting of the Académie de Médecine, in 1887, M. Gustave Lagneau called further attention to the disastrous effects of the *surmenage intellectuel*, or the intellectual strain, exercised on the youth of to day, during the ten years they passed in the lycées. The examinations at the *Ecole polytechnique*, *Ecole normale supérieure*, *Ecole centrale*, *Ecole navale*, require such a severe course of studies that the physical reaction is often very serious. MM. Ernest Martin, Béard, Charcot and Henrot have found a considerable number of students belonging to these establishments affected with myopia, dyspepsia, phthisis, nervous exhaustion, followed in many cases by impaired intelligence. It has become an imperative necessity to recognize that the doubtful intellectual development effected by the present system, detracts from physical aptitudes; the fact that out of a thousand French conscripts, 460 were declared unfit for service, is significant. M Dujardin-Beaumetz, who is doctor at an école normale of young girls, stated that a reform in the programme of the studies pursued in girls' schools was equally urgent. The prolonged hours of study, and the severe examinations are equally detrimental to body and mind. M. Dujardin-Beaumetz deplored the tendency of the present day to educate girls as teachers, who were often better fitted for other employments. The competition for the position of school teacher is something incredible. In Paris alone there are 4,171 girls provided with teachers' certificates who are in quest of the position, while only about 100 vacancies for this position occur during the year."—*Paris correspondent American Lancet, July, 1887.*

The hours of daily work of these Copenhagen schoolboys varied from four to ten and a half, and one-third of them received, in addition, private tuition which materially lengthened the average. Some nine-year-old boys worked eleven hours a day. This is shameful. Such of them as may live to adult age, will find the eight-hour system of labor altogether too long for them. The girls' schools made a worse showing. Of 1,200 girls, fifty-three per cent. were healthy, and thirty-nine per cent. sickly, after one year of study, while on entering school only twelve per cent. were sickly, a healthier showing than that of the boys. At sixteen, sixty-one per cent. of girls were sickly; "the girls had not time for out-door exercise," is recorded of them on their mothers' authority. What is true of school-girls in Denmark, is true here. Such girls find their way too soon, though unwillingly, to places like Bellefontaine and Calvary, and too soon, though usually less unwillingly, to the matrimonial altar. The facts are strikingly and painfully suggestive. The figures of mental and physical failure found in Denmark, can be more than duplicated in our own land. We are a faster people than the Danes. We have before us a picture of degeneracy in the young of a country whose people are not pressed upon as ours are. If the elements of physical stamina necessary to sustain developing brain and mind, are not so strong in us as they were in our ancestors, and English and American

as well as European school statistics sustain the fact, what must we do to be saved as a people, and what must we do to save our children? I have pointed out some of the paths that lead to restoration of that which we have lost and are losing. Shall you pursue them? I know, ladies, from your request for an address on over-pressure from one who has made the mind in its relations to organism almost a life-long study, that your minds have discerned the dangers, and that you are discerning enough to have discovered that our educational methods provide for the exercise and abstraction of mental force, while they have too much neglected the building of the brain.

Our chief aim in our present defective methods of teaching and training has been to run the educational machine to our purpose, with little thought of keeping it in repair and increasing its power as well as speed. The remedy lies in looking more wisely after the balance of bodily waste and repair, the construction, reconstruction and substantial development of body and brain. This done well, and we and our children may safely endure the increased pressure of the present, and over-pressure will become a thing of the past.

Matter and force—physical and psychical, are inseparably united in nature, and what nature has wisely joined together, let us not attempt to put asunder. Though heaven is our desired destiny, we must not forget that we are of the earth, earthly in our capacities and powers.

Selections.

Proceedings of Denver Obstetrical and Gynecological Society.

At the stated meeting, April 25, 1890, Dr. Shollenberger read a paper on "Spontaneous Abortion." He spoke of it as of frequent occurrence, and of its serious effect on the health of the mother. That, primarily, it is of more frequent occurrence with multiparæ than with primiparæ. That frequently it occurs the first few weeks of pregnancy, unknown to the patient. That the accident occurs more frequently between the second and fourth month than at any other time. He mentioned the causes of abortion as

being exciting and predisposing. Among the causes are bad health of either parent, acute diseases, death of the foetus, disease of the uterus and placenta, nervous shock and alcoholic excesses. Accidental physical causes sometimes occur. Under the head of symptoms he stated that there are very few reliable premonitory symptoms, as indications denoting the commencement of abortion are often the first intimation that abortion is threatened. The rational symptoms are pain, haemorrhage and evacuation of the liquor amnii. The discharges should always be carefully examined, in order to assist in making a clear diagnosis. The positive diagnosis is at times a very difficult one, the physician not being positive that pregnancy really exists. Of course, after dilatation has taken place, especially if the membranes protrude, a correct diagnosis can then be established. If the haemorrhage and pain are excessive, if clots are expelled, and the os dilated, the diagnosis of abortion should present no difficulties. The prognosis must necessarily always be guarded. It is necessarily always fatal to the foetus, and we can never be positive what the ultimate result will be to the mother. In the line of treatment, prophylactic measures are important: correct the habit of aborting, and all constitutional taint of either parent. Should all the symptoms of abortion be present, there are two indications, viz.: to arrest the accident, and if this be impossible, to cause expulsion of the foetus and its appendages, as soon as possible. The patient should be compelled to remain in the recumbent position, and morphine or other sedatives given, either hypodermatically or by the stomach. In the use of opium, care must be taken on account of its effects on the stomach and bowels, in producing vomiting and constipation. If the accident can not be prevented, the ovum should be removed as soon as possible. Haemorrhage should be arrested by vaginal tampon of cotton, soaked in glycerine or sweet oil. This will also usually effect dilatation; if not, we can use laminaria, or sponge tents. The vaginal tampons should be allowed to remain *in situ* about six to ten hours. The cases which give the most trouble are those in which the foetus is first expelled and the placenta and membranes remain. In such cases the expectant plan is not a good one, but the uterus should be emptied of its contents at once. If necessary, the patient may be anaesthetized, so that the cavity of the womb may be thoroughly explored.

The curette should be used if necessary. We should teach women the danger that may follow, and keep them in the recumbent position at least as long as at delivery at full term.

Dr. Rothwell:—I have been much interested in the reading of the paper by Dr. Shollenberger. The subject is a very important one. The paper has covered the ground so thoroughly that there seems but very little to add. However, I have jotted down a few points while listening to it. First, I think occupation is a frequent cause of abortion. For instance, women in the rural districts of Germany abort more frequently than their sisters in the cities, no doubt due to the fact that the female peasantry of Germany are accustomed to labor in the fields. In this country, city women abort most frequently, on account of the debilitating effects of city life. Anæmia is a not infrequent cause of the trouble, as is instanced by the frequency of miscarriage in malarial regions where anæmia is common. Uterine affections, especially retroflexion or retroversion with adhesion, are responsible for many cases. Excessive coition, by maintaining congestion and hyperæsthesia of the genital organs, predisposes to abortion. Among the polygamist Mormons of Utah, sexual intercourse during pregnancy is prohibited, and consequently abortions among them are noticeably uncommon. There is not much danger from haemorrhage where the os is not dilated, but I always tampon when the os is dilated, for fear of haemorrhage. I have seen cases occurring in the mountains, three or four days after the accident, and after emptying the uterus the cases did well, showing clearly that there is no immediate danger from sepsis. I had but one case die in the mountains; in this case the placenta had been retained in the uterine cavity one month before the woman had any medical attendance. If the cervix is not dilated I sometimes use tents as dilators. After removing the secundines, I have been in the habit of giving an antiseptic douche (bichloride of mercury). If the patient has no rise of temperature, the one douche is sufficient. The after-treatment is the most important; keeping the patient quiet and using quinine and ergot daily. In removing the placenta I administer chloroform, introducing the hand into the vagina if necessary, using my finger for the uterus, for I find it better than any instrument I have tried.

Dr. Taylor:—My experience does not agree with that of Dr. Shollenberger as to the relative frequency of abortions

in multiparæ and primiparæ, or at least I am sure I have seen it more common in women who had never been delivered of a child at or near term, although having had one or more abortions. Of course, if a woman is predisposed to abortion, this accident is likely to happen during her first, and still more during succeeding pregnancies. I agree with Dr. Rothwell in his views of coitus as a cause of abortion, and I have always warned those who have formed the habit of aborting, on this point. In regard to the diagnosis, the doctor did not mention Hegar's sign, which is perhaps the most valuable sign of pregnancy at an early stage. In the treatment of abortion, the division into cases where there is hope of saving the foetus, and into those where there is not, is very practical and necessary. And we should be very slow to decide that there is no hope of arresting a threatened abortion. In my student days I was taught that if pains and haemorrhage co-exist, the case is hopeless, but I have known several cases in which very considerable haemorrhage and pains co-existed, in which, by energetic treatment, the abortion was prevented. I quite agree that morphine is the most efficient medicine for controlling the pains, but I think it should be pushed more energetically. Instead of an eighth of a grain by the stomach, I should prefer a fourth of a grain hypodermically, and if that does not control the pains within three-quarters of an hour I would give an eighth of a grain more. In a case where a number of abortions had occurred, notwithstanding great precautions, I lately put the woman upon a course of the double chloride of gold and sodium, and had the satisfaction in due time of delivering her of a child at term. When the foetus is cast off leaving the membranes behind, we have a dangerous condition, for, although they remain in utero until they become spontaneously detached without harm, yet there is danger that poisonous germs may gain entrance to the cavity of the uterus and set up septic processes which may terminate fatally. In such a case ergot should be given to free the uterus from clots and favor the detachment of the membranes; and when indications of sepsis arise the membranes should at once be removed—by the finger if they can be readily reached, though I prefer to use a blunt curette rather than introduce my hand into a vagina which has never been distended by a child's head, if the secundines could not otherwise be reached.—*Kansas City Med. Index.*

"The Peculiar People."

Among the English this expression will be found in common use, which appears to be applied to "Faith-Curists," "Salvationists," and other sects of that ilk, as a mild token of the general contempt or want of esteem in which they are held. It is an appropriate way of designating such bands of fakirs, although their methods would justify one in using infinitely stronger expressions without doing violence to truth.

There is at present sojourning in this city a band of "converters," led on by Mrs. Maria B. Woodworth, a self-styled "evangelist," whose methods would well entitle them to be called "peculiar people," if nothing worse. We hesitate whether to class them among the "fools" or the "knaves," and candidly confess that we regret that our choice of terms is so limited. Lest we may be deemed harsh, we will at once proceed to explain. These people are using hypnotism in their performances, and yet assert that the scenes to be witnessed nightly in their tent are nothing more nor less than visible manifestations of the Divine power, brought about through their own humble intervention. We can place them in one of the two above-named categories only after deciding for ourselves whether they do or do not really believe what they say. A brief description of their methods might prove interesting. The speaker, generally Mrs. Woodworth, delivers a long address, during which she continually makes use of suggestion, and in a most effective manner. Quotations are given from the Bible relating instances where people have been thrown into trances by the Divine will, and statements are made that similar manifestations have been given on previous nights and will probably be vouchsafed on that particular evening. After these points have been dilated upon and repeatedly dinned into the ears of the listeners, a general invitation is extended to come nearer to the platform so as to be more accessible to the influence, an invitation that is immediately accepted by the more susceptible hearers, mostly young women, and all probably intellectually handicapped to some degree. A glaring electric light suspended before the audience may be presumed to be a prominent factor in the proceedings. After assembling about the platform, prayers and songs are next in order, and during this time the workers or operators pick out and endeavor to influence the more

promising subjects before them, usually with great success ; the subjects succumb almost by the dozen.

Some may say, "Granted that this be hypnotism, does not the end justify the means?" In reply we can only say that it remains to be proven that one or repeated hypnotizations can permanently reverse the moral tendencies of an individual. Certain it is that such exhibitions are reprehensible, and highly demoralizing in their general effects, even though conducted in the name of religion. While this is undoubtedly the case, it is extremely improbable that anything can or will be done to check the performances unless some very positively harmful results are shown, as, for example, in the case of the Faith Healers recently punished in New York. In the meantime the medical profession can stand back and marvel at the wonderful cures which Mrs. Woodworth and her followers are performing, cures of organic diseases which physicians have treated in vain. One in particular, published in a daily paper, is that of "a young man who was suffering from an abscess in his side which had cost him hundreds of dollars. He was living on tonics and stimulants, but just living and no more. Preparations were being made for a surgical operation which contemplated the removal of two of his ribs which were rapidly disappearing before the inroads of the disease. He went to two meetings, and before he had been in the presence an hour he came under the influence, and now he is cured, ready to testify to the wonderful and inexplicable powers of the faith."

After this nothing more need be said.—*Editor of Weekly Med. Review.*

Children's Hospital.

REPORT OF THREE CASES OF MEMBRANOUS CROUP ; TRACHEOTOMY ; ONE RECOVERY ; REMARKS ON TREATMENT.

[Service of DR. H. R. WHARTON.]

CASE I.—L. N., girl, aged $5\frac{1}{2}$ years, admitted to Children's Hospital on June 6th, with history of four days' illness. On admission there was great dyspnoea ; the child was pale and apparently much exhausted.

Supra-sternal and infra-sternal depression well marked. Tracheotomy at once performed by Dr. H. R. Wharton,

with relief of distressing symptoms. Temperature after the operation was 105 2-5° respiration 40, pulse 125. She was ordered a soda spray consisting of

R	Sodii carb.,	5vi
	Glycerini,	f 5vi
	Aqua dest.	f 5xxiv.

M. To be used by means of a steam atomizer for not less than twenty minutes every hour. An expectorant mixture composed of

R	Ammon. carbonat.,	gr. i
	Syr. tolutani,	m x
	Syr. senega,	m iii
	Mucilag. acaciae, . q. s. ad. f 3 i.	

M. A fluid ounce of which was given every two hours.

Liquid diet only was allowed, consisting of milk and beef tea, given at any time she could be prevailed upon to take nourishment. Stimulant in the form of whisky, half a drachm about every three hours, completed the prescribed course of treatment. The tube was taken out at half-past eleven o'clock on the 6th.

Respiration became normal on the 7th, and there was no increase in respiration or pulse rate from that time until date of discharge. On the 8th the temperature was normal, and remained so throughout the course of the disease. The case was one of moderate severity. The wound rapidly healed. The voice was regained before leaving the hospital. She was discharged cured, on June 18th, having been in the hospital twelve days.

CASE II.—J. L., boy, aged 3 years; admitted on June 28th, with a history of "sore throat and croupy cough," of one day's duration. On admission seemed well nourished and strong; examination showed characteristic patches on tonsils. It was thought desirable to try intubation, in the hope that this milder measure might alleviate the distressing symptoms and thus spare the child the risk attending the more radical method of tracheotomy. Accordingly, intubation was performed, with a natural sequence of diminishing the dyspnœa until the breathing became almost natural.

The soda spray, whisky and carbonate of ammonia mixture were ordered, with the addition of bichloride of mercury, as follows:

R Hydrarg. chlor. corros., . . gr. 1-64
 Tr. ferri chlor., . . m iij
 Glycerini, . . m viii
 Aquæ, . . q. s. ad. f 3 i.

M. Sig.—A fluid drachm every three hours.

After the tube was inserted the temperature was 102° , respiration 45, and pulse 220. On the 30th, the temperature went down to 90° , the respiration was 44, and the pulse 104; from this time on until the 8th instant, when the child died, the respiration ranged between 40 and 64, and the pulse between 104 and 128.

At 11 A. M. on the 1st of July the tube was removed. After its withdrawal the child's lips became slightly livid in the recumbent position and dyspnoea became quite marked. The tube was re-inserted at 12.20 P. M., with marked alleviation of asphyxiated condition. At the time of re-insertion of the tube the temperature had risen to 102° . On the following morning, at 12 M., it fell again to 99° .

On the 4th of July a second attempt was made to take out the tube; symptoms of asphyxia returned and the tube was re-inserted at 2 P. M.; at 12.15 P. M., on the 6th instant, a third attempt at its withdrawal was made, but with no better result than before, and it was re-inserted at 2.20 P. M. At 11.25 P. M. of the same date the tube was coughed up. Temperature at that time was 103° . The child's dyspnœa returned with increased force, his face becoming pallid and lips cyanosed, in consequence of which, intubation having failed, it was deemed advisable, as a last resort, to perform tracheotomy, which was done at 1.30 A. M. At 8.30 A. M. the temperature was 100° ; at 12 noon on the 7th inst. rose to $103\cdot 1\cdot 5^{\circ}$ and fell again to $100\cdot 3\cdot 5^{\circ}$ at 8 o'clock in the evening.

On the 8th inst., at 8 P. M., child was markedly worse; temperature $104\cdot 4\cdot 5^{\circ}$; respiration 64; pulse 188. At 8.30 P. M. death took place. Duration of illness, including the history of one day prior to his entrance into the hospital, was twelve days. The case was undoubtedly one of severe type.

CASE III.—M. B., girl, aged 5 years; admitted on the 8th of July, with history of four days' illness. On admission appeared well nourished, face pale, neck short and thick; dyspnoea very marked; great depression in the supra- and infra-sternal regions on inspiration. One hour after admission tracheotomy was performed. After the opera-

tion temperature was 102° ; respiration 24; pulse 120. From the time of the operation until death took place, the wound ran an unfavorable course, soon becoming gangrenous; inflammation extended over neck and chest; patient was very restless, tossing from side to side, and constantly sitting up in bed. Although there was danger of heart-clot, it required so much exertion to hold her down, and she seemed to have so much relief from her distressing symptoms while in the sitting posture, that, especially toward the close of the disease, she was allowed to have her own way.

On the 12th inst. spray was used every half hour, and from the 13th inst. kept in continuous use. Large beads formed over the chest, and became the seat, when opened, of diphtheritic patches. The tongue was heavily coated, the breath having a foul odor; expectoration soon ceased; examinations showed extension of the disease below the trachea; at times she refused nourishment and medicine, and at others took both greedily. During the course of the disease she had two attacks of epistaxis. From the right nostril a serous diphtheritic discharge continuously kept up. On the 10th inst. her temperature fell to $100\frac{2}{5}^{\circ}$, but soon returned to $102\frac{1}{5}^{\circ}$. On the 13th inst. it fell to normal, being the only time during the course of the disease that it had reached this point. At 6 P. M. on the 14th inst. her temperature rose to $103\frac{1}{5}^{\circ}$; respiration was then 34, pulse 142. During the night of the 12th inst. she became rapidly worse, and it was not thought she would survive the night. Early in the morning she rallied and appeared better, but towards evening again sank. At 7.45 she sprang from one end of the bed to the other and died.

Soon after the operation had been performed this case gave every evidence of being classed with the variety of the disease known as the "malignant type," the word malignant being used to characterize the worse form of the disease, the prognosis of which is exceedingly grave. Even in the mildest attacks Smith ("Diseases of Children," 3d ed., p. 102), aptly says, "we must be guarded in the expression of our opinion as to the probable issue of the illness." The virulence of an epidemic, if prevailing, together with the age of the child are two of the most important factors in arriving at a prognosis. If the case is a sporadic one, especial care should be exercised before venturing an opinion as to the outcome of the disease.

Johnson, of Brooklyn (*Brooklyn Med. Journal*, May, 1890, pp. 304-6), says that statistics on an enormous scale show that 91 per cent. of all deaths from diphtheria are from exhaustion. He further likens the action of the diphtheritic ptomaine, which is excreted in the tonsils and carried by the absorbents throughout the system, to that condition produced by the absorption of the poison from a snake bite. He advocates strongly the bold use of bichloride of mercury, both locally and constitutionally, bearing in mind, however, that corrosive sublimate coagulates albumen. Germs grow in an alkaline solution. He therefore shows by careful experimentation and bacteriological investigation, that before the mercury, when locally applied, can penetrate the false membrane and act as a germicide, it is necessary to shrink up the membrane by local applications of cider vinegar or lemon juice (either, in the strength of 1:4) after which the mercury becomes efficient. In summing up his plan of treatment he advocates free stimulation of the system, on account of the great tendency to exhaustion. Now if he is right in believing that diphtheria and poisonous snake bites produce the same constitutional effect upon the system, namely, that of exhaustion, it is certainly fair to infer that the best known treatment for combating the exhaustion due to toxæmia from snake bites would, to a certain extent, be productive of good results in conjunction with other treatment in diphtheritic cases. S. Weir Mitchell (quoted by Ashurst, "Principles and Practice of Surgery," 5th edition, p. 163), as the highest living authority on the treatment of snake bites, gives as a part of the best treatment for the snake poison the free use of alcohol up to, but *not* producing deep intoxication. We have now considered two of the main factors in the treatment of diphtheria, viz: First, The destruction of the germ. Second, The prevention of the exhaustion. It remains for us to meet the third indication, that of preventing the destruction of the red blood corpuscles. When the corpuscular elements of the blood are in a state of disintegration, no matter from what cause, the natural color of the skin is lost, the tissues become anæmic, and, if the case continues, we have loss of strength, associated with more or less emaciation. In the decolorization of the blood it is necessary that the hæmoglobin should be destroyed, or, more properly speaking, that its main constituent, iron, be destroyed.—*University Med. Magazine.*

The First Execution by Electricity.

By Telegraph to the *Medical Record*.

The first execution by electricity took place at Auburn Prison, at 6:49 A.M. The criminal was William Kemmler, whose name has become so widely known as that of the first victim of the new method of killing, around which there has centered so much scientific discussion and so many legal technicalities. The means to the end of the enactment of the new law of electrical execution for the State of New York are so well known as to render repetition unnecessary. Suffice it to say, however, that the method was finally decided upon after numerous scientific experiments regarding the deadly forces of the alternating electrical current upon the lower animals, coupled with the demonstration of their rapid and painless action. After the taking, by the commission appointed by the Legislature, of an almost exhaustless amount of testimony from electrical experts and others, the law abolishing hanging and substituting execution by electricity finally passed the Legislature and received the approval of Governor Hill. It was the aim of all interested in the outcome of this novel method of killing to make "assurance doubly sure" as to the result, and it was accordingly agreed that a dynamo generating a voltage of from one to two thousand, and with a current alternating from two to three hundred vibrations per second, would certainly answer every purpose. Founded upon such recommendations the apparatus used in the execution of Kemmler was constructed. It consisted of a dynamo capable of generating an alternating current of two thousand volts, with a death-chair, and suitable electrodes, the victim completing the circuit. The death-chair was made from heavy oak, with a high, straight, and slightly inclining back and broad arms. To the back of the chair was a sliding wooden arrangement, the upper portion of which was shaped like a figure 4. The base or horizontal arm of this figure projected forward, from the end of which was suspended the head electrode. The latter resembled very much in shape, as it hung in position, a dinner-bell with an ordinary handle; the bell being the rubber cup and the handle constructed of wood, through the long axis of which the wire of the electrode passed. This wire terminated in a metallic disk, which, being covered with a sponge, was, by a spring arrangement and the sliding down of the figure

4, brought in contact with the top of the head of the culprit. The other electrode was fastened to the lower portion of the back of the chair, and corresponded in position with that of the hollow of the sacrum. This disk of the electrode was constructed similar to the first, and arranged in such a way that it could be strapped against the surface of Kemmler's body. There were other straps to fasten the chest, trunk, arms, forearms and legs to corresponding portions of the chair. The head was secured by a leather mask formed by a forehead and chin band, which was fastened to the back of the chair, leaving the nose, cheeks and mouth exposed. The wire of the head electrode was suspended from the ceiling, while that of the other electrode passed along the floor, and, with the victim in position, completed the current. At one time during the discussion of the best method of transmitting the currents it was proposed to send them through the upper part of the trunk only, by applying the head electrode as before indicated and immersing the hands in bowls of water connected with an electrode. It was argued, and with good reason, that the electro-motor force would thus be expended on all the vital centres and death be as instantaneous as by the other means. It was feared, however, that the possible struggles of the culprit might interrupt the current and thus cause the dreadful experiment to fail. Aside from this the ultimate effects would probably have been the same.

Twenty-six physicians and gentlemen witnessed the execution. Among those invited by the warden were Drs. Carlos F. McDonald, E. C. Spitzka, W. T. Jenkins and George F. Shrady, of New York; Louis Balch and W. J. Nellis, of Albany; Henry A. Argue, of Corning; A. P. Southwick, C. M. Daniels and George E. Fell, of Buffalo, and T. K. Smith, H. E. Allison and Oliver A. Jenkins, of Auburn. The warden was also present. They were seated on chairs set in the form of a horseshoe, in the opening of which the death-chair, screwed to the floor and properly insulated, was situated. When everything was in readiness, Kemmler, dressed in ordinary clothes, was led into the room by the warden and introduced to the witnesses present. He was strangely calm under the circumstances, and after a few remarks in reference to his readiness to die, quietly removed his coat and adjusted his cravat, as if to get ready for any ordinary operation. With a forced assurance in his own mind that death would be instantaneous

and absolutely painless, he deliberately sat in the chair, crowded his bared back against the lower electrode, lent his assistance to the buckling of the confining straps, and even directed that the head electrode be firmly secured in position. While these preparations were in progress, as if appreciating his part in the tragical performance, he apologetically remarked to the spectators that he would do his best to act his part properly. With tender consideration on the part of the warden only two or three minutes were consumed in adjusting the appliances. Then came the time for the signal for turning the fatal switch. In an instant the victim was apparently driven into a shrinking, crouching, rigid mass, with the exposed features in a grin, and the muscles of the entire body in fixed and rigid spasm. He remained in this condition for seventeen seconds, when the current was interrupted and the muscles became relaxed with a momentary and quivering uncertainty. Then all was still and the patient was pronounced dead. Seventy-three seconds after the current was turned off a slight heaving of the chest was noticed, and this was immediately followed by slow, rhythmical, stertorous breathing. Although every sensation was abolished, the forced breathing continued, and with each expiration a slight amount of mucus was bubbled through the closed lips. Notwithstanding the fact that directions were immediately given to turn on the current again, by some misunderstanding on the part of the one who ran the dynamo, this was not done until two minutes had elapsed. Then the same phenomena were repeated, and the culprit was kept under the full power of the instrument—fourteen hundred volts—for two and one-quarter minutes, when all the unpleasant symptoms disappeared. As the result of this long-continued current, the moisture in the sponge of the lower electrode became separated and resulted in the deep burning of the flesh at that point. As soon as the resulting smoke was discovered the circuit was at once interrupted. On examination of the body immediately after the interruption of the second current, Kemmler was declared dead by Drs. Carlos F. McDonald and E. C. Spitzka, the gentlemen who were appointed as the physicians by Warden Durston. The pulse had ceased to beat, the pupils were dilated, and upon the exposed portions of the face and the backs of the hands evidences of commencing capillary post-mortem changes were evident. Three or four minutes after the disconnec-

tion of the second current the eyes were examined again, when the corneæ were found to be depressed and the eyeballs flaccid on pressure. Kemmler was then left in the chair until the autopsy was held.

The autopsy was held three hours after death, under the supervision of Drs. Carlos F. McDonald, E. C. Spitzka, and George F. Shrady, of New York, and performed by Dr. W. T. Jenkins, of New York, assisted by Dr. Clayton M. Daniels, of Buffalo, N. Y.

Dr. Shrady this evening gave out the following as the results of the autopsy so far, as information for public use : Body fairly well nourished. Rigor mortis marked, particularly in the muscles of the jaw, neck and thorax, and gradually extending from above downward, involving the feet and legs last. The post-mortem hypostasis marked over lower portion of body and extending up as far as the anterior axillary line, also on the pendant surfaces of the upper and lower extremities. The upper extremities are partly flexed and rotated outward, the nails showing post-mortem lividity. There was a seminal discharge which on microscopic examination was found to contain a large number of dead spermatozoa. There was marked discoloration of the forehead about an inch in width, corresponding with the position of the strap, beginning at the hair line on the left side and extending to the hair line on the right side. A corresponding discoloration from the pressure of the chin-strap was also noted. There was an oval depression of the scalp upon the vertex, beginning at the anterior hair line and measuring four inches in its long and three and a half inches in its short diameter. Anterior to the posterior portion of the depression and in the immediate line there was a burn one and one-half inch in length and half an inch in width, superficial in character, slightly scorching the hair and crescentic in shape. On small of the back, corresponding to the level of the fourth sacral vertebra below and second above, four and one-half inches in vertical diameter and four and one-half inches in transverse diameter, was a burn presenting four concentric zones, of which the outermost had a pale area, corresponding to that of the rubber cup of the electrode and one-fourth of an inch in diameter.

Succeeding this was a partial and complete vesication, partial below and complete above, about an inch in diameter above and one-third of an inch below.

Then follows a transition zone, which is in its upper third a complete eschar, black in appearance, and in its lower part shows desiccation and is of a greenish-brown color. An internal zone shows a number of vesicles, chiefly peripheral, and below the centre a black eschar, half an inch in its vertical and five-eighths of an inch in its transverse diameter. Above is a tongue-shaped pale area with a lateral projection to the left of the median line, extending about two inches, and an upper projection in the dorsal furrow which is more sharply pointed and which on its periphery shows a reddened portion with here and there vesication. In addition the back showed a number of depressions produced by the folds of the shirt and suspenders, such as are commonly found in dead bodies lying on the back.

On incising the skin over the sternum the blood which escaped was unusually dark and fluid and remained so on exposure. There was no vermicular action of the intestine on exposure to the air or on irritation. The diaphragm extended from the fifth intercostal on the left and the fourth on the right. The blood from the cut surface of the liver was of a crimson-like color. Abdominal organs were normal in position and appearance. The muscles of the thorax were of the usual color. Tar-like spots were noticed on the posterior border of the lower lobe of the left lung. Over half of the lung floated when placed in water, showing a marked emphysematous condition. The bronchi were normal in appearance and contained mucus and air-bubbles. The right lung was adherent throughout to the diaphragm. In the middle lobe of this lung there were numerous well-marked tar-like spots. The spleen was normal in size and appearance. The left kidney weighed three and one-half ounces and the right kidney three ounces; both were intensely congested. The stomach contained a pint of undigested food. The gall-bladder was distended with bile. The heart weighed five and three-fourths ounces, valves were healthy. Bladder contracted.

The scalp on being removed showed the vertex of the skull to be in a desiccated condition, corresponding with the contact of the electrode as previously noted, but of larger area, being four inches by four inches, the zone of the scalp being only two and a half by three inches, the long diameter being antero-posterior. On removal of the skull-cap the dura was normal in texture, somewhat dull in color, particularly over the area corresponding with the

zone of contact. In the prerolandic region the meningeal vessels, measuring along the convexity antero-posteriorly four inches on the left side and three on the right, were filled with carbonized blood. On the internal aspect of the calvarium the meningeal vessels in the dura and their contents appeared to be black and carbonized. The carbonized vessels were so brittle that their ends were torn off with the calvarium and presented a broken, crummy appearance. This carbonization was limited in an abrupt manner. The other meningeal vessels contained blood of a crimson-like hue, corresponding to the outer burn previously described. In its narrowest portion was seen, a little posteriorly in the median line, a dark discoloration sending out a right lateral prolongation three-fourths of an inch in the direction of the longitudinal sinus, and in width seven-eighths of an inch. Over the left hemisphere, one-third of an inch left of the median line, there was a deep carbonized spot corresponding with the carbonized portion of the calvarium. This charred spot corresponded to the dull-colored areas previously described. The pia and gyri themselves were of a pale buff color, the rest had the ordinary rosy injection of the ordinary cortex. While observing this anæmic area it was noticed that its blood-vessels began to fill. The pia and arachnoid on the convexity were perfectly normal. An interesting fact was observed on handling the pons and medulla, in that they were found to be warm. By a thermometer inserted in the fourth ventricle, the temperature was noted at 97° F. This corresponds with an area of temperature on the back of the neck which was noted as 99° F. two hours after death, and 97½° F. three hours post mortem. The smaller vessels of the pia were ectatic. Capillary hemorrhages were noted in the floor of the fourth ventricle, and the same condition in the third ventricle and the anterior portion of the lateral ventricle. The perivascular spaces appeared to be distended with serum and blood. The brain cortex in the area of contact was sensibly hardened to one-sixth of its depth, where there was a broken line of vascularity. The vessels over the corpus striatum showed enlargements in different parts of their ramifications. The pons was slightly softened. The burned integument of the back, on being removed, showed the spinal muscles underneath to be cooked like "overdone beef" throughout their entire thickness. The spinal cord was removed entire, but

showed no gross appearances of pathological condition. Portions of its structure, as well as those of brain-tissue, were preserved by members of the staff for purposes of hardening and microscopical examination. The blood taken immediately after death showed under the microscope a markedly granular condition, almost suggesting an electrolytic dissolution of the red corpuscles.

Fracture of the Scapula.

BY A. HEWSON, M.D.

Read to the Philadelphia County Medical Society, Stated Meeting, May 14th, 1890.

I DESIRE to present for your consideration this patient, treated in the Surgical Dispensary of the Episcopal Hospital during my last term of service. The history is as follows :

J. K., aged forty-two years, male, white, born in Scotland, laborer, weight one hundred and fifty pounds, height five feet ten inches. Fell March 6, 1890, on the corner of wooden steps, indoors, while descending—striking the dorsal aspect of his right scapula, below spinous process, after which he could not move, and remained in the house until next morning, when he walked home with the help of a friend, suffering intense pain. Lotions were afterward applied without relief. He was examined by a physician, but no fracture was discovered, ether not being given.

On March 11th, five days later, he appeared at the hospital, complaining of pain in the right scapula on the slightest motion or touch. He could move the right shoulder-joint but little, and then only with an exquisite pain; the muscles of the supra and infra-spinous fossæ were rigid; the inferior angle of the scapula turned outward and forward; the muscles of the posterior boundary of the axilla right—i.e., teres major and minor, as well as the subscapularis; the skin of the dorsum of the scapula swollen and only slightly discolored, but without ecchymosis. No examination could be made without ether. It was then given by the medical resident, Dr. Tunis, and after profound anaesthesia was obtained, crepitus was found extending from the axillary margin of the scapula to the body of the bone below the spinous processes. By fixing the inferior angle of the scapula after separating it from the chest wall, and moving the upper part of the bone, the patient on his left side, the

crepitus could be made out distinctly; it could also be distinctly felt by fixing the inferior angle and moving the forearm in such a way that the back of the hand touched the patient's back.

The arm during the examination was held by the surgical resident, Dr. L. H. Adler, Jr., and when placed upon the opposite shoulder crepitus was again made out. After recovering from the anæsthetic a pad of oakum inclosed in lint was applied to the dorsum of the scapula, and between the humerus and axillary margin of scapula, and retained by adhesive strips and bandage, fixing the bone as closely as possible to the chest. The humerus was fixed in a vertical position to the side of the chest with the forearm held in a sling; at right angle to arm. The sling was fastened to the circular turns holding the humerus, to prevent traction upon the neck and increase the pressure upon the scapula. The patient was dressed three times a week for the first two weeks, and after the first week was free from pain. Bandages were removed April 8th, and the patient allowed to carry the forearm in a sling. At this date the scapula was more prominent posteriorly, showing the line of callus. Posterior inferior angle about one inch higher than the left. Motion perfect.

April 10th, two days later, sling removed; some slight pain (muscular in character). Measurements were taken as follows: Inter-scapular measurement at the spine, five inches; inter-scapular measurement at the posterior inferior angle, eight inches; from spine to left posterior inferior angle, four and three-eighths inches; from spine to right posterior angle, three and three-fourths inches; from vertebral prominence to posterior angle (right), ten inches; from vertebral prominence to posterior inferior angle (left), eleven and one-fourth inches.

My object in making the measurement from the vertebral prominence was because of its fixed position, the inter-scapular, and from the spine to the posterior angle would not be correct, because of the swelling produced by the overlapping of the fragments. I therefore think the measurement is the most accurate in fractures of this bone.

Pathology. The deformity in this case bears out the opinion expressed by Hamilton, who says: "If the fracture is below the spine and transverse, and especially if its direction is oblique from before backward, the inferior fragment is displaced forward or forward and upward by the

action of the serratus magnus or the teres major; whilst the superior fragment is inclined to fall backward, and is sometimes carried upward and backward by the rhomboideus major."

Prognosis. Hamilton speaks of his inability to replace the fragments when overlapping has taken place; and in this he is substantiated by Nelaton and Malgaigne. Those authors also agree that this deformity does not interfere with the usefulness of the bone or of the extremity, because the perfection of utility of the bone depends less upon its shape as in the long bones. Stiffness in the use of the limb being dependent, as stated by Lonsdale and B. Bell, is due to injury to the muscles or ligaments.

Treatment. It was impossible in this case to maintain the fragments in place unless the parts were opened and wired, owing to the seat of the fracture, and I did not think the case would warrant the operation, especially as the facies bibosus was evident, and the case was to be treated in the dispensary. The next best thing was to elevate the shoulder, which was accomplished by passing the pad of oakum well under the axilla, and fixing the humerus in this elevated position—in this way following out the suggestions of Amesbury, Liston, Lonsdale, S. Cooper, South; while Erichsen uses only the body bandages, as in fracture of the ribs.

I followed, as you have seen, the suggestions of Hamilton and Boyer in placing the humerus in a vertical position, and a small pad between the posterior surface of humerus and the axillary margin of the scapula, together with the other portions of the dressing already described.—*Medical Progress.*

Sutures.

THE following is clipped from a report of the Proceedings of the American Medical Association, by Dr. McKee, of Cincinnati:

"Dr. W. H. Wathen, of Louisville, thought one of the most important subjects connected with abdominal section was that of sutures. The points of importance are: Good quality, aseptic, and not too large. They should be as absolutely aseptic as possible. He thinks very little of chemical antiseptics in ligatures. He never uses sutures which do not come to him in sealed boxes. He will not allow them to be handled by the instrument-maker and his

many customers. He does not believe that in abdominal surgery we need use anything but silk sutures. He never leaves an ovary and tube unless there is a very great desire on the part of the patient to bear a child, and the ovary and tube are apparently healthy; otherwise he would always, when one ovary and one tube were diseased, take out the other also.

"Dr. A. F. Currier, of New York, thought that if we could not appreciate disease in the other ovary and tube, we should not remove them. Whether the woman could have children or not was not germane to the question of operation. We should operate if it is demanded by disease. If not demanded, we should not operate.

"Dr. T. A. Reamy, of Cincinnati, thought it none of the operator's affairs whether a married woman wishes to have children or not. He should leave the healthy ovary, and he commits sacrilege when he touches it.

"Dr. H. A. Kelley, of Philadelphia, said he had operated on about forty cases of pus tubes. In every case but one he removed both ovaries, because he found both tubes diseased. In this one case he had to reopen the abdomen in a short time and remove the other tube. Most operators think it the best plan to remove both tubes, but he should not do it did he think one was healthy. He has had several cases where sutures came out through fistulæ. When he sees a fistulous tract in the abdominal wall, he tells the patient that it will keep up till one or two little knots of ligature come out, and he is generally justified in his conclusion. The ideal ligature is a well-prepared catgut. He is now about to enter upon some experiments with catgut prepared after the method of Döederlein, of Leipsic; that is, by dry heat.

"Dr. F. C. Meyers, of Fort Wayne, preferred the silk-worm suture. He removed one ovary from a lady in 1874, and left one. The lady immediately became very prolific, showing that there was a healthy ovary somewhere.

"Dr. A. W. Johnstone, of Danville, Ky., said that when he bought his silk sutures in America he often had his ligatures come through the drainage-tube. Since buying them in England, he has had whole handfuls of ligatures left in the abdomen to disappear entirely. Our silk is adulterated. It is one-tenth flax, hemp or some vegetable matter, which will not absorb. Pure silk, if placed in caustic potash, will

disappear as a thread, and can be spread about like collodion.

"Dr. Joseph Price, of Philadelphia, thinks that when sutures appear in the fistulae it is due to an imperfect operation. Too many tie the tubes too far from the cornu, one to one and a half inches. This left unhealthy, broken-down matter which can not be scraped away with a curette, and which is not unlike a broken-down gland. When he had sinuses he would, in the vast majority of cases, do the operation over again and go to the bottom of the trouble. We will find a cheesy, diseased condition of affairs at the bottom of the sinus, with probably some attachments. We have no right to endanger a woman's life for a possible conception. A hydro-salpynx is often as virulent as a pus tube, and hence if found on one side remove the other also, unless we are anxious to do a second operation."

"Dr. T. A. Reamy, of Cincinnati, had probably done this operation as often as any one in the house. He did not speak of conception in a sentimental, but in a scientific manner. The conception was the best of the cure."

Diseases of Throat and Nose.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Assistant Surgeon, Brooklyn Throat Hospital; Instructor in Diseases of the Nose and Throat, New York Post-Graduate Medical School and Hospital.

PRIMARY LARYNGEAL PERICHONDRTIS.

David Newman, in *Brit. Med. Jour.*, March, 1890, reports a case of this rare affection. The patient three weeks before admission had several rigors, and was conscious of slight pain in the throat; since then had hoarseness, inspiratory dyspnoea and cough, with slight expectoration. No history of previous throat or lung affection.

On admission, breathing difficult, inspiration noisy and stridulous, expiration quick; respirations difficult, but amount of air ample. Voice very hoarse and high pitched; cough stridulous.

Laryngoscopic examination showed: marked oedematous swelling of mucous membrane of arytenoid cartilages and false cords, leaving only narrow chink between them. Left

vocal cord fixed in median line ; no view obtainable of right vocal cord, on account of fixation of right false cord. After several severe attacks of paroxysmal dyspnoea, patient died suddenly.

On removal of larynx at autopsy, the posterior surface of cricoid cartilage is seen to be distinctly eroded a little to left of posterior median line. Right cord nodular ; immediately below it is an opening into an abscess cavity, extending down into trachea for distance of one-half inch. General oedema and congestion of laryngeal mucous membrane.

REMARKS.—1. Disease obscure and symptoms unusual.
2. No assignable cause for suppuration.

1. In perichondritis of cricoid cartilage there is generally pain on deglutition. Lymphatic glands in the neck frequently enlarge early in the disease. Swelling exists in front of larynx, and external palpation of cartilages produces crepitation and causes pain ; expectoration contains pus. In this case none of these symptoms present.

2. In most cases of perichondritis the disease can be traced to some definite cause. In necrosis the disease may be due to traumatism or imperfect nutrition. Since neither of these conditions existed in this case, the suppuration must have been spontaneous or due to septic infection. In absence of any specific disease to account for spontaneous formation of pus, the author concludes that the affected part must have received some slight injury that was not observed ; this impaired its resisting power, which rendered it susceptible to accidental septic influence.

ELECTROLYSIS IN LARYNGEAL PHTHISIS.

Mermod (*Jour. Resp. Dis.*, April, 1890). This operation requires complete anaesthesia. A two-per-cent. solution of cocaine should be used upon tongue, soft palate and pharynx. The larynx to be painted with one gramme of cocaine dissolved in one gramme of water. Besides cocaine 0.03 grammes should be injected into two points of laryngeal mucous membrane by means of Henyng's syringe. Very long, fine-pointed needles are then inserted into the diseased spots ; these needles are connected with negative pole, the positive pole being placed on same side of neck, outside. The needles are retained in this position for two to four minutes ; and process repeated several times each

sitting. The procedure is not accompanied by either pain or haemorrhage.

During first fifteen days the local condition may be aggravated, the tissue being more infiltrated and swollen. This subsequently decreases, and steady healing ensues. This electrolytic method is especially adapted to early stages of laryngeal tuberculosis where infiltration is localized; and is superior to method of curetting larynx, which is long, painful and difficult.

ACUTE OEDEMA OF GLOTTIS FROM USE OF POTASSIUM IODIDE.

Dr. A. Groenouw (Therap. Gaz., May, 1890) reports nine cases of this nature. The severity of the cases were not dependent on the size of the dose or length of time of administration—occurring in one case on the first day after administration of one three-grain dose. Where the action of the iodide of potash is localized in the larynx, other symptoms of iodism are absent. This peculiar action is attributed to the iodine of the compound, and not to the potassium. In none of these cases was there any local lesion that could predispose the larynx to oedema.

TRICHLORACETIC ACID IN AFFECTIONS OF NOSE AND THROAT.

(Therap. Gaz., May, 1890.) This drug is offered as a substitute for chromic acid. It occurs in colorless rhomboidal crystals, soluble in water and alcohol. It is recommended to be applied by means of a sound having a small cup-shaped extremity in which a number of crystals can be inserted. Before using it on the mucous membrane, a ten-per-cent. solution of cocaine should be employed. After application of this cauterant, a bright ivory-white scab is formed, which remains localized to that point. It differs from the slough resulting from chromic acid, in that it is uniformly thick, has no odor, and no inflammatory after-effects, in this respect being preferable even to the galvanocautery. In one hundred and forty cases no haemorrhage was produced, the scar disappearing in five or six days. So little pain results, that in pharynx and mouth it can be used without the aid of cocaine.

CONTRIBUTION TO HISTOLOGY OF VOCAL CORDS.

Kauthack-Michael (Jour. Lar. and Rhinol., April, 1890). Glands are never found in true vocal cords, but are in sesamoid cartilages, in the angles of vocal bands, and the thyroid cartilage. In normal larynges, papillæ are never found

in the region of squamous epithelium, but they are found frequently in chronic catarrhal conditions.

TUMORS OF GLANDS OF BUCCAL MUCOUS MEMBRANE.

Larrabie-Joal (*Jour. Lar. and Rhinol.*, April, 1890). These tumors occur on arches of palate or vault, on the internal aspect of cheek or lips; may vary from size of bean to a hen's egg; they are rounded on surface, and firm to the touch; are slow in growth, and have no tendency to ulceration. They have been considered as hypertrophies of salivary glands, and termed adenomata. They are composed of mixed epithelium. They may remain benign in character or may result in carcinomatous degeneration. They should therefore be removed as early and thoroughly as possible.

EARLY DIAGNOSIS OF MALIGNANT DISEASE OF THE LARYNX.

D. Bryson Delavan (*Amer. Laryng. Asso.*). Three early diagnostic points are of use:

1. Thickening of the mucous membrane, with loss of motion in the same neighborhood, implies an infiltration of muscles. An apparent paralysis of one side of the larynx, associated with thickening, demands a cautious prognosis.

2. New growths of larynx, of papillomatous nature, encircled by ring of reddened, infiltrated membrane, are malignant; those not surrounded by zone of inflammation are benign.

3. The trans-illumination of larynx by electric light enables one to demonstrate the relative density of an enlargement of appreciable size, but as a means of recognizing the existence of a new growth of recent origin and small size, this method is of doubtful value.

OBSERVATION ON DEVELOPMENT OF TASTE ORGANS OF MAN.

T. Tuckerman (*Jour. Anat. and Phys.*). The upper surface of tongue of the foetus of fourteenth week is marked by papillary elevations of the mucous membrane. The elevations vary greatly in size and shape, and the spaces between them are filled by epithelium. This epithelial covering has an average thickness of about 0.024 mm., and is composed of three indistinct layers. The superficial layer consists of slightly flattened cells; the middle layer is much thicker and made up of nucleated spheroidal or polyhedral cells. The deep layer is formed of a single row

of columnar cells. The mucosa is penetrated deeply at intervals by proliferations of epithelium which indicate the future positions of glands. The striped muscular fibres show their striæ but faintly.

The circumvallate and fungiform papillæ in various stages of development could be observed. A few taste-bulbs were detected in former variety, some penetrating the superficial layers of epithelium. The author thinks the taste-bulbs may be found in the embryo of ten weeks.

A CASE OF HYPERSTROPHY OF ADENOID AT BASE OF TONGUE PRODUCING SERIOUS SYMPTOMS.

J. E. Boylan (*Jour. Amer. Med. Assoc.*, July, 1890). Patient, an anæmic, nervous woman of forty years. Had cystic enlargement of thyroid gland. About larynx, considerable pain, irritability, huskiness of voice and constant desire to swallow. Inspection disclosed rugged honey-combed tonsils, arytenoids slightly enlarged. The entire surface of tongue between the fauces was raised in a pale red tumor that completely overshadowed the epiglottis, its irregular surface consisting of small elevations or lobules, some as large as tip of little finger. This mass caused labored respiration, and at times severe dyspnoea. Applications of galvano-cautery caused much pain, but relieved the patient entirely of all distressing symptoms in larynx. Defective respiration was probably due to direct infringement of hypertrophied and inflamed tissue upon the region of chink of glottis.

COMPLICATIONS CONSECUTIVE TO ABLATION OF ADENOID GROWTHS.

M. Cartaz (*Jour. of Lar. and Rhinol.*, July, 1890). After removal of growths either by forceps or by scraping, a haemorrhage results, which may be abundant, but which generally stops soon after operation. Several cases of severe haemorrhage are reported, four by Bryson Delevan, and two by author. This is not caused by tearing of an important vessel, but occur when the tumors have a fibrous consistency, the vessels retracting slowly. These are also encouraged by previous congestions of throat, from any cause. The treatment recommended is irrigation with a very warm and astringent liquid. If this does not suffice, it will be necessary to place a large plug in the naso-pharynx.

OCULAR SYMPTOMS DUE TO DISEASES OF NASAL CAVITIES.

Hamilton-Wolfenden (*Jour. Lar. and Rhinol.*, June, 1890). 1. Empyema of anterior and unilateral hypertrophic rhinitis of left side, concentric contraction of the visual field for all colors, infraorbital neuralgia. The evacuation of the empyema and its cure was followed by cure of eye symptoms.

2. Ecchondrosis of the triangular cartilage and chronic rhinitis with asthenopia, pain in eyeball, injection of eyes when used for work, contraction of the visual fields. Eye symptoms disappear on removal of growth.

3. Spine of bony septum causing chorea magna, asthenopia, subjective color sensation, sneezing. Cured by removal of spine.

4. Post-nasal growths of 106 cases, eye symptoms co-existed in 51; in 22, catarrhal conjunctivitis; in 7, follicular conjunctivitis; in 16, granular conjunctivitis; in 6, blepharitis.
—*Brooklyn Medical Journal*.

A Simple Method of Controlling Obstinate Epistaxis.

Not very long ago a man walked into my office bleeding profusely from the right nasal cavity. He had had similar attacks on previous occasions, which were always very difficult to manage, and during one of them he had nearly bled to death, despite the efforts of the two physicians in attendance. He had finally to be transported to the hospital, where the hemorrhage was checked with the assistance of Bellocq's canula. The present attack had lasted three or four hours, had resisted the usual means of treatment, and the patient declared he had lost a pint of blood. During the ten minutes or so that he had been awaiting his turn in the waiting-room, he had filled the bottom of a cuspidore to the depth of two inches with blood coagula. Despite his powerful physique—he was tall and weighed about two hundred and fifty pounds—he showed signs of great weakness, was pale and exsanguinated, and breathed with difficulty through the mouth, the nose, from which blood rapidly dripped, being stopped up with clots. I seated him and packed his nasal cavity with absorbent-cotton pledges, squeezed dry of carbolized solution, but without avail. The blood oozed through the firm packing. I removed the cotton, made him blow out the blood-clots, and introduced Goodwillie's

nasal speculum, but failed to recognize the source of the hemorrhage, owing to the impossibility of wiping away the blood as rapidly as it welled up from the deeper recesses. What I did recognize, however, was the fact, that the man was rapidly growing weaker, and that he was in imminent danger of falling from the chair in a swoon. There was but one thing to do, and that was to cork up his nasal passages, anteriorly and posteriorly, without loss of time. I had no Bellocq's canula, however, and there was no time to procure one. In this predicament I bethought me of a simple substitute for the Bellocq, which served me so well that the hope that it may render the same service to others, under the same embarrassing circumstances, must be my excuse for presenting this account of an otherwise very uninteresting experience. I had some rubber drainage-tubing, of assorted sizes, on hand, from which I selected a piece of small calibre, but of sufficient resiliency, about the thickness of a parlor match, and about ten inches in length. One end of this I introduced into the right nasal cavity, and pushed it along the floor of the inferior meatus, through the clots, until it reached the pharynx, whence it curled forward within easy reach of forceps, by which it was drawn out at the mouth, meeting the other end projecting from the nose. The subsequent steps were similar to those employed after the passing of the Bellocq cannula. To the mouth end of the tubing I attached a small, compact wad of elastic lamb's-wool, rolled in iodoform gauze, and, drawing upon the nasal end, I slipped the wad into the post-pharyngeal space and stretched the tubing until the cessation of all trickling of blood down the post-pharyngeal wall showed that the nasal aperture was occluded. Still keeping the tubing tightly drawn to its fullest extent, I rapidly packed the interior nasal recesses with long strips of iodoform gauze to just within the nostril, all around the tubing. I now tied a knot in the rubber, close to its exit at the nostril, and through it passed a cross-piece of tubing of somewhat larger calibre, just long enough to fit easily inside the nostril. Finally, releasing the end of the rubber, its elasticity caused it to fly back, so that the knot and cross-piece rested upon and firmly held in place the anterior gauze-packing. The nasal cavities were thus firmly occluded at both outlets, without any external evidence of the tampon, or any unsightly bulging of the soft parts of the nose. The elastic tubing was at just a sufficient tension to support the packing

without the least discomfort to the patient. After forty-eight hours it was easily removed, without recurrence of the hemorrhage, by slightly drawing the knot out of the nostril and cutting the tubing just behind it.—*Med. Rec.*

Dentition.

THOUGH a physiological process, dentition is often attended with so much pressure and hyperemia as to cause both local and general symptoms. Some infants, indeed, get their teeth so easily that there are no signals of discomfort to herald their coming, but this is not the rule. The earliest local token of teething is a marked increase in the salivary and mucous secretions of the mouth. Until after the third or fourth month the salivary glands are almost inactive, but as soon as, or even before, dental activity begins, the mouth becomes full of fluid, which, as the infant has not yet wit enough either to swallow or eject, slavers over the chin and front of the chest. When the tooth has come through, the drooling becomes less, but increases again with a renewal of active dentition.

Fever is a frequent attendant on teething. It might be slight and of little account, but not seldom is so high as to cause apprehension of danger. Perhaps its most distinguishing feature is its erratic course. It comes and goes regardless of the rules that ordinarily govern febrile movement. It may last but for a day; it may continue for many days; it may come and go several times before the teeth that caused it have erupted. The morning temperature may be as high as, or higher than, that at the close of the day.

Prominent among the phenomena of dentition are those that indicate an irritable and highly impressionable state of the nervous system. Unusual fretfulness; fits of screaming; eyes half opened and rolled upward in sleep; night-terrors; obstinate wakefulness; jerkings of muscles; squinting; carpo-pedal spasms; these and other like phenomena show that the "nerves are set on edge," and are not infrequently the forerunners of general and alarming convulsions. In the hot months the most common and troublesome concomitant of teething is an intestinal flux. It is doubtless, so far as the teeth have to do with it, a result of reflected irritation. In summer it is the constant menace of the whole infant population, especially of bottle-fed babies in cities. Very often there is gastric as well as intestinal

irritation, and the vomiting may be as annoying as the diarrhoea. Occasionally the onset of the disorder is so abrupt, and the symptoms so violent and unrelenting, that it is properly called cholera infantum. In these, and even in cases that are less severe, there is extreme thirst and restlessness and rapid wasting. In cold weather the air tubes are much more likely than the bowels to receive the brunt of the reflected irritation. During dentition many infants are extremely sensitive to drafts and temperature changes. Another cause of taking cold is in the wetting of the clothing over the chest by the copious drooling. For these reasons, a "tooth cough" is extremely common in damp and wintry weather.

Less frequently than diarrhoea or bronchial catarrh is a disordered urination due to dentition. It may show itself under different forms. There may be a constant desire and effort to empty the bladder when there is nothing in it, or a spasmodic retention, or an annoying dribbling from incontinence. These symptoms will not often continue for more than a day or two at a time, but they may recur again and again before the teeth that caused them have erupted.

Now and then there is a troublesome otalgia, apparently the result of a reflected irritation, or an acute coryza, as shown by snuffling, sneezing, and red and watery eyes. In other cases the irritation expends itself in a surface eruption of eczema, or erythema, or urticaria, especially about the face and scalp—the "tooth rash" of nursery talk.

In regard to treatment Dr. Plant says: Having local and general symptoms, there must also be local and general treatment. When the drooling is copious, saturation of the clothing over the bosom should be prevented by a slavering bib covered with rubber cloth or other impervious material. An over-secretion of saliva may be restrained by belladonna. As little as a drop, or even a half drop, of the tincture once in four hours may do as well as more. A teething child likes to press its gums against hard substances. The rubber ring now made for the purpose answers it better than the bit of wood or the coin of my infant days. The pretzel does very well also.

Until recently it was thought to be the most important part of the local treatment to cut the gums. It is now known to be needless and useless in nearly all cases, and possibly because of that it has fallen into an unmerited desuetude. Though it is rather the fashion now to condemn

the use of the gum-lancet altogether, Dr. Plant is of the opinion that when a tooth is nearly through and the gum is seen to be tense over it, a free cross incision may liberate the crown and give quick relief to a suffering child. I would advise you not to use the lancet for a simple elevation of the gum, for that is no sure indication that the crown is near the surface. Such an appearance may come and go several times before the tooth has erupted; in fact, we may never safely predict the speedy cutting of a tooth unless its sharp edge can be felt beneath the gum. If there is gingivitis, scarifying the gum by light touches of the lancet will lessen the hyperemia and afford some relief.

For feverishness, nervous erethism, and fretfulness, the bromides will render good service. From two to five grains in solution with syrup flavored with peppermint or winter-green, may be given and repeated as may seem necessary. If the infant is overwakeful, an equal quantity of chloral may be given in similar solution. Aconite he recommends in *small* doses, repeated often. He puts from five to twelve drops of the tincture in a full goblet of water, and gives a teaspoonful every fifteen minutes for two hours; then every hour.

It must not be forgotten that a profuse diarrhoea with dentition is as exhausting and as certainly fatal, if not checked, as though due to any other cause. So, if the movements should exceed three or four in the day, they must be controlled.

In convulsions, if there is a tense gum over a crown that can be plainly felt or seen, there can be no harm in making a crossed incision through it. Very generally, however, other treatment will be needed, as the hot bath and the bromides, with or without chloral. When there are threatenings of convulsions, Dr. Plant treats them with a light dose—one to three grains—of calomel, or hydrargyrum cum creta—two to five grains—with about the same quantity of powdered rhubarb, or followed after some hours by a dose of castor oil or castoria. Besides that, he gives one of the bromides in such doses and at such intervals as may be necessary to control the convulsive tendencies.—Dr. Wm. T. Platt in *Arch. of Ped.*

On the Treatment of Hay Fever.

BY FRANK HAMILTON POTTER, M. D., BUFFALO, N. Y.

Just as long as the pathology of hay fever is in the present chaotic condition, its treatment will be uncertain and many times most unsatisfactory. I do not mean that there is no pathology of this disease; on the contrary, there is a great deal, as a paper we have just listened to so clearly shows, but it has not yet reached that definiteness that can give us a fairly sure basis upon which to form a rational treatment. Some cases get well,—there is no doubt of that,—under careful and painstaking management, and such a result is one of great satisfaction to all concerned. Many cases, however, that have been reported as cured are really far from that condition, and could they appear here at this moment would demonstrate to you the uncertain meaning surrounding the word "cure" as it appears in our medical literature. All that we can be expected to do this evening is to show the line of treatment that should be adopted, in the light of our present knowledge, when we have to do with a case of hay fever, whether it comes to us under that plebian name, or under the more aristocratic one of rose cold, or, again, under perhaps the more scientific one of hyperesthetic rhinitis.

In the first place I desire to state that, as far as I can ascertain, no case of this disease has been cured by constitutional treatment alone. Many years elapsed between the year 1819, when the disease was first described by Bostock, and 1881, when Daly first called attention to the local lesions generally found in the nasal passages in this disease, and it is not too much to say that in all that time its treatment can be fairly described as *eminently unsuccessful*. On the other hand, local treatment alone is short-sighted and deceiving. Temporarily, its results are brilliant, but, as a rule, they do not last, and a case that has been cured in this way often returns to torment the operator and belie the statistics. It is just as bad to condemn local treatment as to condemn constitutional treatment, and the narrow generalist is as much bound down by the green withes of a confining theory, as is he who thinks the nose is the fixed point around which all things revolve.

Broadly, then, we must look at this disease from many points of view, and consider what we have learned:

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- I. As to the treatment during the attack.
 - II. As to the local treatment ; and
 - III. As to the general or constitutional treatment.

By the first, we seek to palliate the severity of the attack ; by the second and third, we seek to prevent the attacks recurring. It is now very generally conceded that medical treatment should not be undertaken during the attack. The latter may be lessened in its severity in many ways, but thorough treatment should be postponed to the period of immunity.

We all appreciate to-day that change of locality will, in a large number of cases, prevent or stop an attack. This is a measure that can not be employed by many, either on account of the expense or other reasons. When nothing prevents this indulgence, the periodical return of the disease is a most admirable excuse for a journey, and if locations can be found where the sufferer is free from it, he would be foolish not to take advantage of that fact. Something can be done, however, to relieve the patient that must stay at home. He must obey, with perhaps more strict observance, the laws of personal hygiene than is necessary for one not a victim of the disease. He may be in certain directions more sensitive than others. For instance, he may take cold easily, and when this is so he should strive to make himself less liable to this, by the proper employment of the cold bath, the judicious selection of clothing, etc. Or certain articles of diet may disturb him, and then, of course, they should be avoided. We can not repeat in detail what is so well known to the profession, but simply mention the importance of hygiene in the conduct of a case of hay fever, because we believe it has much to do with the comfort of the patient. During the attack the nasal passages are generally inflamed and very sensitive, and a watery mucus is constantly flowing from them. They should be washed out frequently with some bland, unirritating solution, and then the surfaces covered with a coating of an oil to protect them from dust. When dust or pollen is especially offensive, a small piece of fine sponge inserted into each nostril will still further protect them. Cocaine has, on account of its peculiar properties, come into almost universal use by hay fever patients. There is danger in its use, and when given to a patient he should be told that too frequent spraying of the nose with it will very likely disturb the nervous system and produce restlessness, sleeplessness, and the like. It should be ap-

plied after the nose is washed clean, before the oil is used. A two or four per cent. solution is all that is required.

Internally a combination of atrophia and morphia is useful. They must be given in small doses frequently repeated. Sulphate of atrophia 1-200 gr. and murate of morphia 1.32 gr. is a good proportion. It has, occasionally, been my good fortune to stop or prevent a threatened attack by this treatment. Success with it, however, is not universal, and it can not be considered a specific.

We have now to consider the management of the patient when free from the disease.

Looking first to the local treatment, we find that we must seek to relieve a general hyperesthetic state of the nasal mucous membrane, and also in the vast majority of cases to remove lesions of an obstructive character. The means employed for the correction of the latter often serve to relieve the former, and thus it would seem that they are frequently dependent the one upon the other. These obstructive lesions are of many kinds, and may be found either of the hard or soft tissues—frequently they are of both. They may be slight and projecting or so large that they prevent breathing through the nostrils. They may be hypertrophic or neoplastic in their character. Whatever may be their organization, they should be removed. This is especially so if they cause contact between the walls of the nostrils. The pressure this contact produces is not only a source of local irritation, but causes reflex symptoms, widespread and aggravating. It is not our purpose to describe the methods now adopted to get rid of these obstructions. That belongs to the realm of the specialist. It will suffice if we are able to impress upon each one here, that these things must be looked into and corrected in order to give hay fever patients the benefit of the best treatment. We are not likely to control the disease unless this is done.

Where the operative treatment does not relieve the highly sensitive condition of the nasal mucous membrane, or again, where the latter exists without obstructive lesions requiring operations, then the hypersensitiveness can be controlled by mild and superficial alteration of the nerve ends found in the membrane. This is an important part of the treatment, frequently, in my opinion, overlooked in the management of these cases. Now, as to the general or constitutional treatment, simultaneously with the correction of the local disease we must ascertain in a systematic man-

ner the life history of the patient, particularly as to hereditary influences, temperament, etc. In the majority of cases we find this disease appearing in persons of the so-called neurotic habit. They may also show other departures from the normal that must be taken into account. We must consider their personal hygiene, the diet, exercise, bathing and so on. In a word, we must strive to place them in a condition of the greatest resistance. This is so easily said and so hard to accomplish, that we must frequently be content with an approach at what we aim rather than its full realization. In addition to all this, drugs have here an important place, and will well repay the difficulty in finding the proper combination for any given case. Nerve tonics and alteratives have the first consideration. Mackenzie, of Baltimore, who is inclined to consider the disease as a pure neurosis, relies much upon the following formulæ:

I. Rx Zinc phosphid., . . . gr. 1-16
Quin. sulph., . . . gr. ii.
Ext. nuc. vom., . . . gr. $\frac{1}{4}$
M. Ft. pil. no I.
S. To be taken before meals.

II. Rx Liq. Arsenic, et hydrarg., iodid., gtt. iii., ad v.
S. In a wineglassful of water, after meals.

These are really valuable, and will indicate the kind of remedies to be employed. Besides those in the above combinations, we find recommended by various observers belladonna, hydrocyanic acid, valerian, assafetida, musk, lobelia amber, the bromides and iodides, chloral, opium and hyoscyamus. Iodine, in some cases, will be found of great value. A very pleasant way to prescribe it is in the form of hydriodic acid. The important point, as already suggested, as far as drugs are concerned, is to find the formula that will act with benefit upon a given case. This will often tax the patience and skill of the physician, but frequently, after repeated trials, success will follow when least expected. One or two other things deserve mention. The cold douche to the spinal column has a decided therapeutic value in these cases; most authors, from Gordon, who first, in 1829, mentioned it, to Bosworth, have regarded it with great importance. The latter author makes some pertinent suggestions as to its application. It

is something more than a cold bath. The water must be dashed against the spine either by means of the shower bath or else by an assistant. A simple method is to sit in the bath-tub and press a sponge full of cold water over the back. The intermittent application of cold in this way acts as a general tonic to the whole nervous system. The patient feels better at once, and after becoming accustomed to it, considers the day not rightly begun without it. If this paper aimed to be exhaustive, many other details in regard to treatment would have to be studied. What has been said, however, will indicate to a slight extent the manner of dealing with hay fever cases. It is a broad subject, still far from settled. And this being so, it is becoming in any one undertaking the treatment of these patients to recognize its complexity, and above all to remember that various factors enter into it, that it has a local as well as a general element, and that the best treatment will consist of special and constitutional therapeutics combined.—*Buffalo Med. and Surg. Jour.*

Albuminuria and Life Insurance Examinations.

UNTIL recently, the presence of albumen in the urine was thought to be evidence of renal disease, and sufficient cause for rejection of a candidate for life insurance. During the last few years many observers have reported cases of albuminuria without other evidence of kidney disease. Instances of this kind have been repeatedly observed under varying conditions, and exhibiting in themselves widely different phenomena. Again, the investigations of Mohamed, Gull, Sutton and others show that sometimes in serious organic lesions of the kidney, the urine even showing casts, no albumen may be detected. In the cirrhotic kidney a pre-albuminuric stage is often seen, only to be suspected by the arterial tension, polyuria, abnormal strength of cardiac pulsation, etc. These facts have a very important bearing on life insurance examinations, and have of late received much attention from those interested. Papers on transient albuminuria, as related to life insurance, have been presented by Drs. Johnson, Pavy and Stewart, in England, and Drs. Shepherd, Washburn, Tyson and others, in this country. A recent article by Dr. Caldwell, of Fremont, before the Northwestern Ohio Medical Association, bears on this subject. Many different terms have been used to

define this condition, viz.: latent, simple, transient, postural, physiological, adolescent, psychical and paroxysmal albuminuria. All these titles are open to objection, while there is good reason for asserting with Johnson that there is no such thing as physiological albuminuria. Yet investigation has shown that the appearance of albumen in the urine, in more or less quantity, as the sole evidence of kidney disease is not uncommon. Stewart, in 407 cases, found 31 per cent.; Shepherd found 2 per cent. of 35,000 cases observed; Washburn found 6 per cent. of 338 cases; in all these no other evidence of kidney lesion was found. The causes of this temporary occurrence of albumen in the urine are not well understood. It is well known that mental anxiety, over-study, etc., may be followed by albuminuria. Dr. Andrew Clark noticed this effect on candidates before the Civil Service examination. In these and other cases originating through nervous channels, there is probably paresis of the renal vessels. Chilling the surface, over-exertion, or indigestion may derange the renal circulation through vaso-motor influence, and give rise to albuminuria. An intermittent or periodic form is not of infrequent occurrence. The albumen in some cases only appears during the morning hours. In persistent albuminuria the greatest quantity is found after food and exercise, viz., in the evening, while after abstinence and rest little or none may be found, as in the morning. Periodic albuminuria is most frequent in young persons, and is termed "adolescent" for this reason. It is also most common in males. It is characteristic of most periodic types that the night urine is free from albumen.

In Pavy's cases the albumen appeared only on rising in the morning, a phenomena to be explained by the sudden filling of the weakened renal vessels on assuming the erect posture. Most cases are influenced by diet, muscular effort, etc., which increases the quantity of albumen; but this is not without exception. In neurasthenic cases, in which condition periodic albuminuria often is found, a liberal diet and muscular exertion often lessens the albuminuria. Another form of albuminuria is of hepatic origin; the failure of the liver to convert albuminoids may result in excess of these constituents in the blood and their excretion by the kidneys. If the theory of Ralfe be correct, viz., that one of the functions of the renal epithelium is to convert albuminous constituents not elsewhere changed into

urea and similar nitrogenous excreta; then the excess of nitrogenized foods with lowered functional activity of the liver and muscles in oxydation would throw more work on the renal cell than it could accomplish, with consequent loss of albumen in the urine as a result. Another form distinct from cyclic or periodic albuminuria, yet paroxysmal in character, very closely resembles hemoglobinuria; the urea is increased and urobilin is present. It is thought this condition results from excessive hemolytic action of the liver. If this be true, the albumen should be in the form of paraglobulin. It has been found that in the albuminuria of pregnancy and that accompanying puerperal states, that paraglobulin is found in the urine in excess of serum albumen. This fact is exceedingly important in its relation to the anemia of so frequent occurrence under these circumstances, and shows that albuminuria may have its origin in blood conditions rather than in the kidneys. The obscurity and complexity of these transient forms of albuminuria make them of great importance in examinations for life insurance. It is difficult to determine whether they indicate structural renal disease or not. Some forms have been known to exist for years without any other sign of kidney lesion. Yet there is always danger that long continued filtration of albumen and the associate vascular derangement of the glomeruli will induce organic change. Dr. Caldwell, in the paper referred to, adopts the suggestion of Dr. Tyson, "That if no albumen is found in the morning urine, the applicant may be accepted." We doubt the correctness of this rule; as has been stated, some cases of undoubted renal disease show less and some no albumen at all, after abstinence and rest. Other cases, again, of cyclic type, in young persons, show a large and sometimes the only amount at that time. Any case showing a persistent presence of albumen at any period of the twenty-four hours should be rejected. Our knowledge of kidney lesions is not sufficiently accurate to warrant a certain opinion whether the appearance of albumen in the urine is from functional or organic causes, but its persistent presence should be a bar to acceptance by an insurance company. It is a question whether the recent and more delicate tests employed give any more certain results than the older methods. Many observers believe them open to more sources of error. The careful use of heat and nitric acid is yet perhaps the most trustworthy method. In the light of

recent discovery it is necessary to revise our methods for detecting the presence of sugar in urine. Most of the tests employed depend upon oxidation in an alkaline solution, and it has been found that the reducing action is not confined to glucose, but is shared by many other possible ingredients of urine. Even the indigo carmine test will show the same reduction with perfectly normal urine, if the boiling be carried far enough. It is doubtful if any tests in common use are reliable. A recent authority, Dr. Seymond, declares fermentation and phenylhydrazin to be the only certain tests for sugar. It is certain in the light of current known facts that we must revise our long established theories of urinary analysis, at least so far as concerns the significance of albuminuria and the detection of glycosuria.—*Editorial in Toledo Med. Jour.*

Mic^roscopy.

Research on the Irritability of Leucocytes

BY JOSHUA M. VAN COTT, JR., M.D.,

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Masset and Bordet (*Jour. de la Soc. R. des Scien. Méd. et Nat. de Bruxelles*, 1890). The tactile sensibility of leucocytes asserts itself, through their formation of pseudopodia, as soon as they come into contact with a resisting body. In a hanging drop of lymph the leucocytes resting on the glass put out numberless prolongations; so also do those on the surface of the lymph-drop, though not in as active a way. Those leucocytes in the centre of the drop preserve their spherical form. The tactile sensibility of the leucocyte explains also its passage through porous bodies, and its capacity to take up foreign bodies. The same movements are induced by chemical substances as the products of retrograde metamorphosis of the bacteria and those of disintegrated cells. Leucocytes move rapidly in those places where these substances have spread themselves.

A capillary tube is filled with a culture of *staphylococcus pyogen. alb.*, and one end, being first sealed, is then

inserted into the abdominal cavity of a frog, and in a day or so removed. On examination it is found to contain leucocytes. The same is true of tubes filled with other bacteria, and liquids in which the bacteria were killed with heat. The result, however, is not the same when fluid resembling plasma (but without bacteria) or products of retrograde metamorphosis are used. If one injects a frog with oxgall, the laden cells produce toxic substances. Capillary tubes filled with the peritoneal exudate of this frog, and inserted into the abdominal cavity of a second frog, contains, after twenty-four hours, many leucocytes, while tubes filled simply with lymph or oxgall give negative results.

All motion of leucocytes is stopped under the influence of chloroform vapor, to be regained on its withdrawal. A frog is anæsthetized in a bath of water with chloroform, or in a solution of 1:20 of paraldehyde. Tubes filled with culture-liquid and inserted into the abdomen of this frog contain no leucocytes. In inflammation, motion of leucocytes is induced through their contact with the vessel-wall. Wandering leucocytes struggle against destroyed tissue-areas by virtue of their chemical sensibility. By microbic damaging the bacteria draw the leucocytes in a manner in through the soluble substances which they have separated; when the lesion is not microbic, the chemical sensibility of the leucocytes is induced by the substances produced by the damaged tissue-cells. Immigration is suppressed by chloroform. After anæsthesia, dilatation of the mesenteric vessels obtains, and a purely mechanical peripheral arrangement of the leucocytes follows; but here the process ends: there is neither amœboid motion nor immigration. This irritability of the leucocytes explains many things. It throws light on the mechanism of reparation of wounds, and on the cell-infiltration of organs whose elements have been damaged (hepatitis, nephritis). It confirms the theory of phagocytosis, since it explains why the leucocytes collect around micro-organisms which have infected any given part of the organism, and how they in a way build defensive zones around the infected areas.

[The automatism of leucocytes has been long known, but the experiments and conclusions above cited are both ingenious and interesting, and open a wide field of thought. It has already been shown, in Metchinkoff's laboratory, that certain bacteria are taken up by leucocytes and carried

by them into the tissues; and it is highly probable that some of the microbic diseases develop in the system in this way. On the other hand, it would seem probable, in the light of these investigations, that the chronic inflammations of syphilis, alcoholism, etc., are the result of the irritation produced by badly perfected end-products of retrograde metamorphosis, acting as "chemical" excitants, not only of the leucocytes, but also of the wandering connective-tissue corpuscles, and the nuclei of some cells.

One of the weakest points in the pathological sciences of to-day is the little knowledge we possess of the micro-chemistry of the tissues, both healthy and diseased. If we only knew more accurately the nature of the normal "end-products" and their relation to tissue-elements, we could know more of pathological "end-products," and would find a very close relationship betwixt them and the erratic behavior of cells in chronic lesions.—V. C.]

AN UNUSUAL FORM OF CASTS IN URINE WITHOUT ALBUMEN.

Von Hoerslin (*Münch. med. Wochenschr.*, No. 45) describes the presence in great numbers of dichotomously divided hyaline casts in a urine having a specific gravity of 1035, after an attack of renal colic.

Inasmuch as the urine contained no albumen, v. H. is of opinion that the casts must have been formed from a derivative of albumen.

Oppel (*Anat. Anzeiger*, v., No. 5) describes the following modified Golgi method for demonstrating the peculiar intra-lobular fibrous network in the liver, which surrounds the blood-vessels, and has been already found by others with other methods. An alcohol specimen of liver is immersed for twenty-four hours in a half per cent. aqueous solution of kali chromic. flav., and then washed in a very weak solution of ag. No. 3 (a few drops of a three-quarter per cent. solution in 30 c. cm. of aquæ destillat.), and then laid in a three-quarter per cent. solution of ag. No. 3. Already in one hour, and completely in twenty-four hours, the fibrous net-work is colored. The tissue is then laid in aq. destil. for a few hours, and then in alcohol.

Paraffin imbedding is not excluded. Pieces over one cm. in dimensions require a stronger (four per cent.) kali chrom. solution. The same results were obtained with lymphatic glands and spleen, and like results were obtained with other chrome salts.

A RARE FORM OF CARCINOMATOUS STRICTURE OF THE ILEUM.

Chiari (Prager med. Wochenschr., 1890, No. 3) reports a case, aged seventy-seven, with marked dilatation of stomach and greater part of small intestines, while remainder of intestines were much contracted. The cause lay in a ring-form stricture of the ileum, 20 cm. above the ileo-caecal valve, and so small as to admit only a 0.6 cm. bougie.

The stricture was formed of a secondary carcinoma which had involved only the serosa and muscularis of the gut, and the primary growth lay in the gall-bladder.

Gleanings.

A SUCCESSFUL NEW DRUG.—An efficient emollient and sedative is one of the chief indications in the treatment of the urinary tract.

Among the remedies employed for this purpose Pichi (Fabiana Imbricata) has through clinical testing won an enviable place.

The demand for this drug, and the difficulties of obtaining proper supplies, has led to the appearance in the market of much Pichi of inferior and therapeutically useless quality.

Parke, Davis & Co. state that they employ a special agent in the habitat of this drug to collect supplies, and guarantee its quality. They will also, on request, supply samples to those physicians who desire to clinically test it in their practice.

TWO INTERESTING NEW DRUGS.—Among new drugs recently investigated are two of much promise, Cocillana and Naregamia Alata. The evidence thus far obtained from clinical experience would indicate that these remedies are likely to prove an important addition to the expectorants and respiratory stimulants now employed. In the spasmodic cough of acute bronchitis, in the hacking cough of phthisis, and wherever there is marked interference with the respiratory function through accumulation of secretion of the inflamed membranes, these remedies are likely to prove efficient. Parke, Davis & Co., who have introduced these remedies, offer samples of them to physicians desiring to test them clinically, also reprints of articles concerning them free of charge.

DIET IN URINARY INSUFFICIENCY.—Dujardin-Beaumetz concludes: Two principles should form the basis upon which the dietary for patients suffering from urinary insufficiency, as also for albuminuric cases, is built, viz:—(1) To prevent, as far as possible, the formation of poisonous products or toxines in the system; (2) To reduce to a minimum the quantity of toxines introduced into the organism. Hence all forms of meat should be forbidden, especially ham, which is apt to be tainted, for it is an error to suppose the various sorts of meats do not contain ptomaines. As to aliments which may be given, the first place should be given to eggs well cooked, as they have no influence upon the production of albuminuria. Omelettes and starchy matters (especially pure), as of potato and peas; also green vegetables well cooked. For beverages, milk is especially recommended; and if any wine be taken, it should be white wine diluted with water. If any meat at all be allowed, it should *a la mode*, chicken with rice, or fresh pork. From time to time a light purge may be given, and by rigidly adhering to the principles concerning diet above laid down, life may be prolonged for a time.—*Med. Age.*

CHRONIC DYSENTERY.—Dr. F. T. Field (*Medical World*) recommends the following for chronic dysentery:

Ry—Tr. opii,	3 iij.
Ol. terebinthinæ,	3 iij.
Gum acaciæ,	
Sacch. alb.,	aa 3 ss.
Ol. gaultheriæ,	3 ss.
Glycerini,	3 ij.
Aquæ,	q.s. ad. 3iv.—M.

Sig.—3 j every four, five or six hours, according to the severity of the case.

SALOL IN TONSILLITIS.—Salol has proved of much service in the treatment of tonsillitis and pharyngitis, when given in doses of sixty grains *per diem*. It is equally serviceable in scarlatinal angina and suppurative tonsillitis. On account of its insolubility it is prescribed suspended in mucilage, with directions to shake well before using. The diet should be exclusively milk. Under this treatment the dysphagia rapidly disappears, the fever subsides and the progress of the case is satisfactory. In exceptional cases the dose may be increased to ninety grains *per diem*.—*Dr. Cougenhenheim.*

A PARIS correspondent of *The Times and Register*, June 7th, gives the modern medicinal treatment for tonsillitis. As it is now to be considered as an infectious malady, antisepsics are in order. This may be used first, for buccal antisepsis:—

R.	Borate or benzoate of soda,	. . . . .	3 ijss.	
	Hot water,	. . . . .	3 vij.	
Dissolve, and add:				
	Tincture of myrrh,	. . . . .	gr. lxxv.	
	Blackberry syrup,	. . . . .	3 j	M.

Ft. gargle.

Or the following:—

R.	Resorcine,	. . . . .	gr. xv.	
	Distilled water,	. . . . .	f3 vij.	
	Blackberry syrup,	. . . . .	f3 j.	M.

Ft. gargle.

Then brush over the tonsils, several times a day, with the following:

R.	Glycerine,	. . . . .	3 v.	
	Camphor,	. . . . .	gr. xv.	
	Carbolic acid,	. . . . .	gr. xv.	M.

Use as above, with camel's-hair brush.—*Coll. and Clin. Record.*

Merck's Bulletine, May, 1890, gives the following formula for a megrin powder:—

Caffeine citrate, true,	. . . . .	gr. xv.
Phenacetine,	. . . . .	gr. xxx.
Sugar,	. . . . .	gr. xv. M.

Divide into ten wafer-powders. One wafer every two or three hours.

FOR sweating feet, Legoux *Nouv. Remèdes*, quoted in *Nat. Druggist*, May, 1890, recommends:—

R.	Ferri perchlorid,	. . . . .	3 iij.	
	Glycerine,	. . . . .	3 j.	
	Essent. Bergamot,	. . . . .	3 ij.	M.

Sig.—Apply with a pencil or swab.

FOR chapped hands, a writer in the *Provincial Medical Journal* suggests the following as an excellent application:—

R.	Menthol,	. . . . .	gr. xv.	
	Salol,	. . . . .	
	Olive oil, aa	. . . . .	gr. xxx.	
	Lanolin,	. . . . .	3 iss.	M.

As an external application in acute rheumatism, a writer in the *London Medical Record* suggests the following:—

Ry.	Salol,	.	.	.	.	.
	Ætheris, ææ	.	.	.	.	p. iv.	
	Collodii,	.	.	.	.	p. xxx.	M.

In gonorrhœa, Julien (*Revue de Therap.*, March 25th, in *Med. News* April 5th) recommends the following injection:—

Ry.	Liquid vaseline,	.	.	.	p. 145.	
	Bismuth Subnitrate,	.	.	.	p. 10.	
	Resorcin,	.	.	.	p. 3.	
	Iodol,	.	.	.	p. 1.	M.

Squibb's diarrhoea mixture.

Tincture of opium,	.	.	.	1 fl. oz.	
Tincture of capsicum,	.	.	.	1 fl. oz.	
Spirits of camphor,	.	.	.	1 fl. oz.	
Purified chloroform,	.	.	.	180 mins.	
Alcohol, enough to make	.	.	.	5 fl ozs.	M.

Sig.—One teaspoonful every five hours, for adults.

Thielmann's diarrhoea mixture.

Wine of opium,	.	.	.	1 fl. oz.	
Tincture of valerian,	.	.	.	1 $\frac{1}{2}$ fl. oz.	
Ether,	.	.	.	$\frac{1}{2}$ fl. oz.	
Oil of peppermint,	.	.	.	60 mins.	
Fluid extract of ipecac,	.	.	.	15 mins.	
Alcohol, enough to make	.	.	.	4 fl. ozs.	M.

Sig.—Thirty drops every three to five hours, for adults.

Velpeau's diarrhoea mixture.

Take of tincture of opium, compound tincture of catechu (U. S. P.), spirit of camphor, each equal volumes. M.
—*Canada Med. Record.*

Book Notices

PHYSICIAN'S LEISURE LIBRARY.—DRS. BOURNEVILLE AND BRICON'S MANUAL OF HYPODERMIC MEDICATION. By G. Archie Stockwell, M. D., F. Z. S., Member of New Sydenham Society, London. 12mo. Pp. 158. Paper. Detroit: Geo. S. Davis. Price, 25 cts.

This work is both an excellent one and a cheap one. Physicians who have heretofore bewailed the fact that the income from their practice, in consequence of the necessary lowness of their fees, would not permit them to keep themselves supplied with recent medical literature, can no longer do so. Here is a work upon a most important and interesting subject that sells at a price no greater than is asked for the cheap paper-covered novels. When the best medical literature that is brought to the attention of the profession can be thus bought for a trifle, there can be no longer any excuse on the part of the poorest doctor for not keeping his library well stocked with plenty of reading matter of the highest class.

The manual of Drs. Bourneville and Bricon has achieved notable success on the Continent and in Great Britain. It is very complete, and well up to date.

PHYSICAL DIAGNOSIS AND PRACTICAL URINALYSIS.—An Epitome of the Physical Signs of the Heart, Lungs, Kidney and Spleen in Health and Disease. Edited by John E. Clark, M.D., Professor of General Chemistry and Physics in the Detroit College of Medicine. 41 illustrations. Cloth, 12mo, 200 pages; Detroit, Mich., Illustrated Medical Journal Publishing Co. Price, \$1.00.

In the arrangement of this work the object has been to present to the medical student and practitioner a systematic and condensed course of Physical Diagnosis and Urinalysis. The portion on Urinalysis will be found to consist of two parts, practical and reference. The editor believes there is a demand, in many medical schools and by many medical students, for a short, definite course of organic chemistry, touching alone on those subjects of every-day interest to the medical practitioner, such as the analysis of urine, chemical and microscopical; the examination of sputa, bile, blood, bacteria, etc.; methods for the quantitative estimation of the more important urinary constituents, normal and abnormal, such as urea, chlorides, sugar, albumen, etc. To meet these requirements the editor has compiled this volume. Teachers in the laboratory will find the work of advantage as giving the plan for definite instruction with such manipulatory details as will enable students to pursue the course of urine analysis with the minimum of assistance. This is essentially

the same as the course given by the editor in the college with which he is connected. Plates have been introduced as needed to still further assist in elucidating the text.

A TEXT BOOK OF PRACTICAL THERAPEUTICS, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D. (Univ. of Pa.), B. Sc., Clinical Professor of the Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania; Physician to St. Agnes Hospital and to the Medical Dispensary of the Children's Hospital, etc. 8vo. Pp. 632. Philadelphia: Lea Brothers & Co. Price: cloth, \$3.75; leather, \$4.75.

The definition of the word "Therapeutics" in Billings' Dictionary is "that branch of medical science which treats of the application of remedies to the cure or alleviation of disease." It is, in fact, the science of medicine, or, probably, more properly, the science of the practice of medicine.

A person may study pathology, and learn how to recognize the various diseases by their symptoms. He may also study *materia medica* and become acquainted with the effects of the different medicines when administered to a human being, their doses, etc.; yet he will be unqualified to treat diseases with reference to curing or relieving them until he has learned what remedies are called for to meet the various indications which are presented in the morbid actions of diseases. In idiopathic fevers and in many inflammatory affections there are observed a frequent pulse, hot skin, lessened secretion, etc.; what remedies must be administered to meet these phenomena, and what should be their doses? The knowledge alone which a student has learned of the effects of different drugs upon a healthy person will avail but little in affording him the required information. It will be perceived that, besides being familiar with the nature and character of diseases, and having a knowledge of *materia medica*, there is another branch of medicine to be studied before a person can become competent to act the part of a physician, *viz.*: Therapeutics, a branch that "treats of the application of remedies to the cure or alleviation of disease."

The work on our table has just been issued from the press. It has been written both for students and practitioners. It is fully abreast of the times as regards

theoretical progress—the progress which necessarily follows the advance of physiological and pathological knowledge consequent upon late researches—and as regards the application of all the new remedies to the treatment of disease.

Experience in teaching and practice as well as in experimentation have combined to fit Prof. Hare peculiarly to discern the real needs of students and physicians, and thereby to supply these needs in the best manner. The student is too often required to perform acrobatic feats of memory and invention in associating and reconciling widely separated statements, and disgust at his almost certain failure is apt to develop him into a physician without faith in the reasonableness of his art. Prof. H. has obviated this difficulty by comprising in one cover a work on therapeutics proper and on treatment, each part being alphabetically arranged, yet so interwoven with the other by references that the student will have the least possible difficulty in learning and remembering the nature of his therapeutic researches, and in using them to the best advantage when brought to face the various diseases in fact instead of in print. He deals with non-medicinal as well as with medicinal remedial agencies, excluding alone electricity, for the reason that it is now a specialty in itself. There is included a table of doses and of poisons and antidotes. The alphabetical arrangement of the book is supplemented by two large indexes, one general and one of diseases, with brief recommendations and references to the best modes of treatment.

We have no doubt but that the work, in consequence of its meeting so fully the wants of medical students, will become the generally accepted text-book upon therapeutics in all the medical colleges of the country.

Translations

Translations from Our Foreign Exchanges.

Translated for the MEDICAL NEWS, from the French, by Dr. Illowy, Cincinnati, Ohio.

DYSPEPSIA FROM ENTEROPTOSIS.

THE history of dyspepsia, despite all that has been done to date, remains still to be made. Many theories have been put forth—some based on inflammation, others on the

symptomatology; some see in dyspepsia a neurosis, others an alteration altogether chemical of the gastric juice. Professor Lee has, with us, placed himself at the head of the partisans of the chemical theory.

Dr. Glenard, of Vichy, considers dyspepsia as a neurasthenia, and Dr. Pourcelot has developed this pathogeny in his inaugural dissertation, and we shall follow it step by step.

For Dr. Glenard, neurasthesia has four categories of symptoms, which according to their degree of constancy and the order of their appearance, are: 1. Asthenic symptoms (general debility, weakness of the kidneys, of the stomach); 2. Mesogastric symptoms (twitching, weight, hollowness, emptiness, false hunger); 3. Gastric symptoms (flatulence and symptoms of vapor; pain, sourness, burning, contraction, cramp); 4. The nervous symptoms (insomnia, irritability, melancholia, impotency, vertigo, headache, palpitation, noises, neuralgias, crises, etc.).

By a series of deductions Dr. Glenard was led to admit as one of the sufficiently frequent causes of dyspepsia, a primitive prolapsus of the intestines and in particular of the right bend of the colon. He believed he could generalize the lesion, and leaving the stomach dilatation (Bouchard), the gastro-colic dilatation (Trostour), on a secondary plane, he invokes a special, causal, process—*Enteroptosis*.

That which is most new, if not absolutely original, in the researches of Glenard, is his story of the attachments, modes of suspension, relations of the digestive tube, completed by an exposition of the effects which can be produced upon the digestion and upon the health in general by the disturbances supervening on the normal state of what, according to Glenard, may be called *Intestinal statics*.

Now what is, properly speaking, enteroptosis? This word, formed by Glenard from two Greek words, signifies a falling of the intestines.

It manifests itself most frequently in individuals who lead a sedentary life, whose work is chiefly intellectual. Bad alimentary hygiene has also a certain influence, but less than in other varieties of dyspepsia. There is, however, one special circumstance that plays a capital role in the etiology of enteroptoses: that is pregnancy (sixty per cent. of the cases, Glenard). The flaccid, inert abdominal walls can no longer support the viscera, and splanchnoptosis results in

consequence. Uterine affections, faces, blows, muscular efforts, abuse of corset, may be a starting point.

Enteroptosis may be either primitive or consecutive, primitive especially in women presenting at the same time a floating kidney or a prolapsus of the uterus; consecutive when it succeeds to gastric atony.

The symptoms are subjective and objective. The *subjective* symptoms consist in *malaise* (unpleasant feeling) coming on frequently, if not always, after meals, whilst when fasting the patient feels absolutely well. These unpleasant feelings come on after meals, and, on the other hand, they are in direct relation to the nature of the aliment ingested—fats, farinaceous articles, wine (undiluted), etc.

They reach their maximum about three hours after meals. The appetite is generally preserved, the patients even experiencing a necessity to eat.

In his article Dr. Pourcelot gives the following explanation:

Two or three hours after meals the free hydrochloric acid reaches its maximum in the gastric juice. This acid provokes pain sometimes very atrocious (like burns, raw wounds), of which the patients complain very much. Vomiting eases them and the ingestion of food soothes them by reason of diluting the contents of the stomach.

Constipation is habitual; the stools are ordinarily ribbon shaped, and frequently a mucous or muco-membranous enteritis co-exists.

The patients frequently wake up about two o'clock in the morning in consequence of these gastric pains provoked by an excess of the hydrochloric acid, and the proof is that a sitting posture, the ingestion of food, eases them, and that they are less marked after a copious repast. The patients complain at the same time also of precordial oppression, palpitations, of a desire to eat, etc.

They complain also of pain localized in the right hypochondrium; of intercostal neuralgia.

The patients lose flesh rapidly and become hypochondriacs.

The malady presents three phases or periods:

1. *Period of Debut*, in which are observed puffiness, somnolence, eructations, at first inodorous then acrid, pyrosis, epigastric pain, irregularity of stools. At this time we have frequently a transitory acute stage (gastric embarrassment).

2. *Stationary Period*.—The greater part of the functional

troubles, enumerated above, persist, and furthermore there appear eructations with alimentary taste, insomnia, constipation, loss of flesh.

3. *Period called Neurasthenic.* — The appetite remains good, constipation is obstinate, stools are grayish, vomiting rare. The nervous symptoms predominate. The pulse is slowed, dicrotous, intermittent, the respiration is slow and superficial.

Besides these symptoms there are some others less constant, which are observed more especially in women after confinement, and which may prove the source of error in diagnosis. These are constipation, the irregularity of stools, various disturbances of the appetite, a sense of constant fatigue, an impossibility to stand erect and especially to walk any length of time, insomnia accompanied by signs of anaemia and nervosism.

The patients present the following objective symptoms: They are thin; their color is pale, slightly sallow and sometimes at certain points even subicteric. They have the yellow naso-labial furrow. They have mournful, dejected countenance.

The tongue is somewhat yellow at the base; it is large, spread out. The pulse is small, regular, slow. The skin is thin, dry. The abdomen is flaccid, flat, sometimes contracted about the region of the umbilicus.

The stomach is habitually dilated and gives a splashing sound. Pressure immediately over the umbilicus, in the right flank and the point of the ninth right rib, is painful. Epigastric pulsation (aneurism of students) is noted, and this is sometimes observed by the patients themselves at certain periods (emotions, digestion). It is visible to the naked eye. It has its seat in the aorta, and it is always perceptible to the left of the median line over an extent of from two to five centimetres.

When the epigastric region is explored there is found two or three centimetres above the umbilicus a small, resistant mass situated in front of the aorta, the pulsations of which it transmits. This is a flattened cord, two and a half centimetres, at most, in width, barely one centimetre in thickness, transverse in direction, crossing the aorta, continuing to the right of this vessel a length of five to six centimetres. It is movable from above downward. In lowering it a sensation of resistance is felt, and very soon it escapes the fingers to its first position.

This cord is the transverse colon; in compressing it against the aorta a fine crepitation is felt. It exists ordinarily in the enteroptosic. The patient is sometimes relieved by pressure upon it, whilst at other times the pressure is painful. It is more especially well defined three to four hours after a repast.

It is this cord which transmits to the abdominal parietes the pulsations of the aorta.

In compressing the left iliac fossa with the ends of the united fingers, we feel as if we could roll around a hard cord, not large, which is nothing else than the sigmoid flexure.

The cæcum repelling, giving the sensation of a spiral, moderately sonorous, is warped inward. It can be followed more or less high.

The large and small intestines are narrower than in the normal state; there is generalized chronic enterostenosis.

Enteroptosis results from diminution of intra-abdominal tension caused by intestinal stenosis and augmentation of the specific weight of the viscera resulting from the absence of gas and the weight of the ingesta.

Pourcelot thus sums up the symptoms of enteroptosis:

Stomach.—Epigastric splashing in from two to seven hours after a meal.

Intestine.—Sensitive points; epigastric pulsation; cord of transverse colon, left iliac cord; cæcal spiral warped inward; enterostenosis.

Cavity of Abdomen.—Flaccidity of parietes; colon transverse to umbilicus, small intestine in the smaller basin; enteroptosis.

Besides, there is frequently observed a lowering of the liver, of the kidneys, and of the uterus.

Enteroptosis may be confounded, in its first period, with the so-called nervous, flatulent, acid, atonic dyspepsias, with gastralgia, with various uterine affections, etc.; in its second period, with hypochondriacal dyspepsia, with hypochondria, with dysmenorrhea; in its third period, with neurasthenia, the various forms of anaemia, with latent cancer, and with chronic ptomaic auto-intoxication.

In the absence of subjective symptoms (exacerbations of malaise about three in the afternoon, waking at 2 A.M., irregularity of stools, aggravation resulting from the ingestion of certain aliments—fats, starchy foods, wine, milk),

in the absence of objective symptoms (transverse colon-cord, left iliac cord, cæcal spiral twist drawn inward, sternocoraceous tumor in the right hypochondrium, mobile kidney), there exists still another capital diagnostic means for Dr. Glenard; that is, the test of the girth.

"If with the object of responding to the indication of raising and supporting the intestinal mass that is to combat the enteroptosis, an abdominal cincture be put on sufficiently tight so that it compresses the hypogastrium from below upward, we will find the mesogastric and neurasthenic symptoms will be rapidly dissipated, whilst the chomelien symptoms (flatulence, pain, regurgitation, acidity, etc.) will become more aggravated if they had been previously marked or will become more prominent if they had been latent." (Glenard.)

The proof of the girdle is absolutely demonstrative, and its results can be regarded as even decisive in certain cases in which it has been practiced in the horizontal decubitus.

However, in certain subjects we have enteroptosis, and the proof is negative; it may even be paradoxical: that is, aggravate the condition of the patient (Glenard).

We must, therefore, not neglect the other symptoms in order to arrive at an exact diagnosis.

M. Fereol has indicated the following symptoms: We place ourselves behind the patient, and with both hands raise up the whole intestinal mass; the patient experiences a feeling of comfort and of real relief, which disappears as soon as the manœuvre is terminated.

As to the treatment of enteroptosis, it should respond simultaneously to the two following indications:

1. Combat the visceral prolapsus and augment the abdominal tension.

The pelvic girdle (supporter, cincture, corset) responds to this first indication.

2. Combat the functional enterostenosis and regulate the stools. The daily laxative will answer for this.

3. Strengthen the digestive organs, excite the secretions of the digestive tube and the annexed glands, and invigorate the organism.

For this purpose administer the alkalies, prescribe hydro-pathic treatment, a cure at Vichy, and a proper regimen.

The pelvic girdle is a hypogastric cincture, which is applied for a double purpose: to squeeze low and to squeeze much.

The girdle is in general well supported, and M. Glenard affirms that a patient who has worn it does no more think of complaining of it than does the myopic of his glasses.

It is indicated in all phases of the disease. It is the first application to be brought to bear on it, and the last to be suppressed, for it combats the cause if not all the consequences.

The laxatives alone are the sole hypnotics for the dyspeptic. The alkalies are necessary, and Vichy water is the most recommendable type.

The regimen will consist of meat, cooked and raw; fresh eggs, raw. Vegetables aggravate the constipation.

The enteroptotic should avoid salmon, eel, etc., under pain of subhepatic colic at 2 A.M., cholericform diarrhoea. But milk, milk foods, cream, are of indisputable digestibility.—*Paris M. U. Med. de Canad.*

Editorial.

MEDICAL CONSULTATION BOOK.—Dr. G. P. Hackenberg, of Austin, Texas, proposes to publish a work entitled as above if he can obtain sufficient encouragement. It will be, according to the title, a Pharmacological and Clinical Book of Reference, containing the Therapeutics of a full list of the officinal and non-officinal articles of the *Materia Medica*, with a consideration of the action of medicine, including an extensive collection of favorite prescriptions from the most reliable authorities of the medical profession; and all so classified as to be ready of access for authenticated treatment of each disease in its different stages and complications, etc., designed for the consultation room; will be sold only by subscription.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The regular Annual Meeting of this body will be held in Louisville, Ky., in the Liederkranz Hall, on Market Street, October 8, 9 and 10. The Chairman of the Committee of Arrangements has announced that every preliminary is provided for, and the programme is rapidly filling up. A large number of missionaries, says *Progress*, will be present to look after the obliquities in the members; meantime, the membership will be creditably seconded by a goodly number of invited guests. Dr. I. N. Bloom, Chairman of the

Committee of Arrangements, will have all arrangements made so as to be satisfactory to all concerned.

The announcement of the meeting should have appeared in the last issue of the MEDICAL NEWS, but in some way it got crowded out.

The following in regard to the meeting of the Association we copy from a letter sent us:

"The Mississippi Valley Medical Association in its coming meeting promises to eclipse even its former record. The programme is filling up rapidly with the best men of the Valley. Aside from this, Dr. John A. Wyeth, the eminent New York surgeon, will deliver an address, and Dr. Frank Woodbury, of Philadelphia, beloved and esteemed by all, will read a paper. The following are a few of the prominent gentlemen who have consented to read: Reamy, Cincinnati; Love, St. Louis; Ray, Louisville; Lydston, Chicago; Scott, Cleveland; Sutton, Pittsburgh; King, Kansas City. The local arrangements at Louisville are on a scale which is superb. They know how to do things down there, and they are going to improve their reputation. Banquets, balls, receptions and excursions are planned. That elegant hall, the Liederkranz building, has been secured. All meetings, exhibits and everything will be under one roof. To add to the interest of the occasion, the American Rhinological Association will meet at the same place the same week, viz.: October 6, 7 and 8, 1890. The Mississippi Valley Medical Association has a part of its law that nothing can be discussed during the sessions of the Society save and except science as brought out by the papers read. Everything else, such as ethics, quarrels, medical politics, receives attention at the hands of committees, and their decisions are not open to discussion, but are final, thus saving an immense amount of valuable time. The time of the Society is not wasted by blatherskite ethical squabblers, who are so thin-skinned as to get up in arms at real or fancied though just criticisms. The Mississippi Valley Medical Association is the outgrowth of the old Tri-State Medical Society, which comprised the States of Kentucky, Indiana and Illinois. In 1883, at Indianapolis, the name was changed to the present one with the view that the Society should draw from the whole Mississippi Valley. The meetings are characterized by great harmony, intellectual and scientific activity, with absence of strife. The officers of the Association are: President, Dr. Joseph

M. Mathews, Louisville, Ky.; Vice-President, Dr. C. R. Earley, Ridgeway, Pa.; Secretary, Dr. E. S. McKee, Cincinnati; Treasurer, Dr. C. F. McCahan, Chattanooga, Tenn.; Chairman Committee of Arrangements, Dr. I. N. Bloom, Louisville, Ky. Don't forget the date—October 8, 9 and 10, 1890. Be sure to bring the ladies."

A PECULIAR LAW.—We understand that a law has recently been enacted in New York (We believe that it took effect on the first of the present month, September), empowering a policeman, whenever he encounters a youth under, or apparently under, the age of sixteen, who is using tobacco in any form, smoking or chewing it, to arrest him and take him before the magistrate of the district, there to be arraigned for misdemeanor. In fact, the policeman has not only the authority to arrest, but it is made his duty to do so.

Such a law should be enacted in every State of the United States. The use of tobacco is particularly injurious to the young, who, on account of it, grow up stunted in both body and mind. There is no doubt but that it begets a craving for liquor; and thousands of men, who are drunkards to-day, have been made so by having contracted the habit of using tobacco when young. But independent of its creating an appetite for alcoholic stimulants, its use is terribly injurious *per se*. It is a strong narcotic, and the indulgence in it debilitates the functions of the brain and nervous system.

From the traces left of them in the ruins of cities of which history gives no account (and in consequence called prehistoric), there are reasons to believe that, at more than one time, all the inhabitants of the world have been destroyed, and the earth peopled by another race. If there should ever take place another destruction of the world's inhabitants, resulting probably from the prevalent degeneracy and demoralization too great to be remedied, we have no doubt but that the effects of the use of tobacco will play no small part in the causes.

OHIO HUMANE SOCIETY.—The Ohio Humane Society is engaged in the work of preventing cruelty to children and dumb brutes. But as we have not a few times described the objects of its labors, it is not necessary for us to do so now. We will only say that it is engaged in a work which, if it were not for it, would not be done at all. In the seventeen years of its existence it has accomplished great

results. In many instances it has substituted kindness for cruelty, and brought happiness to many families in which previously discord and unhappiness prevailed. But its means have always been inadequate for the most efficient work. Under the circumstances it has determined to appeal to the general public for assistance. It has resolved to open at Cincinnati, on November 11th next, an *Exposition or Bazar* of such goods—merchandise, wares, scientific instruments, implements, machines, products, agricultural, etc.—as the friends of humane effort are willing to donate for this purpose, and at the close of the Bazar or Exposition on November 22nd, to sell such property for the benefit of the treasury of the Ohio Humane Society and its branches. Everything that has a money value will be thankfully accepted; and it will, therefore, be easy for every person, who wishes to advance the cause of humanity, to contribute something. The merchant can send something from his stock on hand, the farmer from his crops, the physician from his instruments or library or from his scientific collections, the banker from his vaults of gold and greenbacks, the artisan, clerk and laborer from his work. Every contributor will receive due credit for his or her gift. Whatever present can be made conspicuous will be made so.

No person should hesitate to give because he feels that he can give but little. It takes only one hundred cents to make a dollar, and it requires but one hundred dollars to find a home for several poor, ragged, forsaken children for several weeks. Just think how much good a very few dollars will do. So do not decline to give because you can not give but little. Nevertheless give all in your power, for you will add that many more jewels to your crown.

The organization in Cincinnati wishes to provide for itself a permanent home. By doing so it can give every dollar donated to it directly to its great work, and will not have to expend it for rent. Besides, if it can purchase a house for itself, there will probably be rooms that it can rent, and thus have a permanent income. It is a great hindrance to a humane society's work, if sometimes, on account of the dearth of collections, it gets so behind in paying its rent, it is in danger of being turned out of doors, and its existence threatened.

For further particulars address either the office of the MEDICAL NEWS or Erastus Burnham, Secretary, 310 Elm Street.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 274. } OCTOBER, 1890. { VOL. XIX. No. 10.
Old Series. } New Series.

Original Contributions.

On the Removal of Enormous Vesical Calculi by the Supra-pubic Route, with Report of a Recent Successful Case.

BY J. WILLIAM WHITE, M.D., OF PHILADELPHIA.

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF
PENNSYLVANIA, SURGEON TO THE UNIVERSITY, PHILA-
DELPHIA, AND GERMAN HOSPITALS.

Read before the College of Physicians of Philadelphia, November 6, 1889.

PATIENT, æt. fifty-five years, from Renovo, Pennsylvania, was admitted to the University Hospital May 4, 1889, with the following history:

He had been troubled with symptoms of vesical irritability for twenty-six years, suffering severe pain during urination, chiefly at the end of the penis. He had always been a moderate drinker, usually of beer; he was a constant sufferer from dyspepsia.

Examination of urine: Specific gravity 1012, reaction alkaline, small amount of albumen, accounted for by the pus present; no sugar.

Microscopically: Abundant bladder cells, pus, and triple phosphate. No casts.

Sounding clearly demonstrated the existence of a calculus in the bladder, and gave the impression that it was of moderate size, as the peculiar click was only to be elicited when the point of the sound was turned in a particular direction. On May 8 the patient was etherized and a lithotrite was introduced into the bladder. Repeated efforts were made either to seize or to crush the stone, but were unsuccessful, the points of the instrument seeming to slide over the surface of the stone, and always without taking

hold. I remarked to those present that I was dealing either with an encysted calculus, or with one of the largest size, or with both; that the stone was apparently a hard one, as not the smallest particle was brought out by the blades of the instrument, and that for these reasons the supra-pubic operation was indicated. This I at once proceeded to perform.

In the absence of a rectal colpeurynter, a half dozen small sponges fastened to silk threads were inserted into the rectum. Ten ounces of boracic acid solution were injected into the bladder, bringing it well up toward the umbilicus. A piece of rubber drainage tube was tied around the penis to prevent the exit of fluid. I then opened the bladder in the usual way, making a small incision immediately above the pubes. On dividing its interior wall with the knife, the point of the latter impinged directly upon the stone, which was another evidence of its unusual size. On putting my fingers into the bladder I found it was nearly filled with an enormous calculus occupying the *bas fond*, and covered over at least three-fourths of its surface with folds of mucous membrane held tightly in place by strong bands of lymph. It was with great difficulty and only by the exercise of considerable force, that I was able to strip this covering from the stone. I finally succeeded in doing so, using the pulps of my fingers so as to do as little violence as possible to the tissues. The wound in the bladder wall and that in the soft parts were enlarged upward, the stone seized with the forceps, and, finally, delivered. Two large drainage tubes were introduced through the wound into the bladder, and two superficial sutures were placed in the soft parts. The bladder was washed out every three hours with a saturated solution of boric acid with 1:5000 bichloride of mercury. The bichloride caused an erythema around the wound, and phenol sodique 1 to 10 of water was substituted. One drainage tube was removed May 22, the remaining tube May 27. A soft catheter was passed through the urethra and retained in position. On June 3, the wound was almost healed and the catheter was removed. A small amount of urine found its way through the wound. On the following day the temperature rose to 101.8°. There has been no movement of the bowels for some days. The constipation was overcome by a dose of Rochelle salts, and the catheter was replaced June 7. The temperature at once fell to nor-

mal, and remained so. No urine passed through the wound after June 10.

On June 14, the catheter was finally removed, and the patient left the hospital entirely well June 17. A careful examination of his urine at this time revealed nothing abnormal.

The patient made a practically uninterrupted recovery, although the length of time the disease had existed, the close adhesions of the stone to the bladder walls, its enormous size, necessitating not only a larger wound than usual, but also causing considerable damage to the edges of the wound during the removal of the stone, all led me to feel great anxiety as to the result of the case. The stone weighed at the time of its removal nearly nine and a half ounces (4,550 grains); its great circumference was eight and a half inches, and its transverse circumference seven and a half inches. The patient sat up on the 25th day, and the wound was entirely closed at the end of four weeks.

I have to-day received a letter from him, in which he says that he has never been better in his life.

This case seems to me of special interest from three points of view:

1. The absence of fatal kidney disease in a case of such long standing, and in the presence of such an extreme source of urethral obstruction, frequent urination, etc.
2. The encysted condition of the calculus.
3. Its unusual size and weight.

I am quite aware that many cases have been recorded in which enormous calculi have been found after death in the bladder of patients who died from intercurrent disease, or from conditions not directly involving or dependent upon the urinary tract.

In the majority of instances, however, it is probable that when a stone attains a weight of more than two or three ounces, and is carried for any length of time, it produces a condition analogous to that which I found in the case of a patient from whom I removed post-mortem a calculus weighing five hundred and thirty-two grains.

He came to me with a history of long standing vesical calculus, which was easily confirmed on examination, and which also showed that the stone was probably of extremely large size; I therefore decided upon the supra-pubic operation, to which the patient consented. He was extremely weak, and had a profuse dysenteric diarrhoea.

The night before the day fixed for the operation he suddenly died, and the autopsy, which I conducted the following afternoon, showed a condition of the kidneys which made it marvelous that he lived so long. The entire secreting structure had disappeared, and the organs were transformed into multilocular sacs containing enormous quantities of muco-pus. The ureters were dilated to almost the calibre of the small intestine. The bladder contained a calculus weighing five hundred and thirty-two grains. The origin of this dilatation of the ureters and kidneys in such cases is of great interest, as no appreciable obstacle to the entrance of urine into the bladder is usually discoverable. It seems probable that in some instances the dilatation is brought about by the frequent contraction of the walls of the bladder, each act of this character temporarily interrupting the flow of urine through the vesical end of the ureter. This, taken in conjunction with the extension of inflammation from the bladder by continuity, probably explains the condition. An operation would have been certainly fatal, and I was thankful to have escaped the additional risk of death during the use of ether. The urine was so loaded with vesical debris that the condition of the kidney could not be ascertained with any certainty.

A brief review of the history of some of the cases in which excessively large stones were operated upon will show at once that the patients were almost invariably in a condition which rendered surgical interference surely and more or less rapidly fatal. As Keyes says: "Surgical works on this subject teem with rare and curious cases of calculi of great size and weight, the largest of which will be found to have been taken from dead bodies, and the next in size pretty uniformly to have brought about fatal results by their removal during life."

Among examples of unsuccessful attempts to extract large stones may be mentioned the case operated upon by Vitellius and recorded by Fabricius Hildanus, in which the stone weighed twenty-two ounces.

Geyer details one in which the fragments weighed ten ounces.

Charles Preston mentions one taken from a priest, in 1690, and preserved in the Charité Hospital of Paris. It weighed fifty-one ounces, but the patient died before the operation was completed. Borellus describes one of eighteen ounces extracted by Quesnotus. Marteau removed one of fourteen

and another of twelve ounces. Mr. Birch extracted one of sixteen ounces from a man in St. Thomas' Hospital; Deguise one of thirty-one ounces. Graefe, of Berlin, extracted one of twenty-one ounces; LaMotte, Vidal and Eller all mention examples of twelve ounces. In all those cases the patients died in from one to ten days. In a case of Sir Astley Cooper's, in which the stone weighed sixteen ounces, the patient survived only four hours, and in the case of Mr. Dalrymple, of Norwich, in which the operation was abandoned before its completion, and the patient died in three hours, the weight of the calculus was upward of twelve ounces. Mr. Erichsen reported a case (*Lancet*, 1885) of a primipara in whom a large tumor was found obstructing the outlet of the pelvis, and necessitating craniotomy. A month later a stone was removed by the vesico-vaginal operation. It weighed five and a half ounces, and measured eight inches in the long and six inches in the short circumference. The patient died in eight days, and at the autopsy extensive disease of the kidneys was found, the right being converted into a mere cyst, while the left was in a state of chronic pyelitis with great dilatation of the ureter.

Sir James Earle reported (*Lancet*, 1853) the case of Sir Walter Ogilvie, Baronet, of Dundee, who, at the age of 23, became paralyzed from the effect of a blow on the back. Twenty years later Mr. Benjamin Bell diagnosed stone, and recommended extraction, but the operation was declined. At the age of 53, the patient's sufferings became so violent that he determined to have it extracted.

In consultation with Mr. Cline, the operation of suprapubic lithotomy was thoroughly considered, and concluded to be "uncertain and dangerous, because the bladder, thickened and exquisitely irritable, could not be further distended with fluid, and the stone, although so large, had not raised it sufficiently high to obviate the danger of wounding the peritoneum and penetrating into the cavity of the abdomen. The usual lateral operation was, therefore, judged to be the only safe and probable means to be attempted." This was accordingly performed, but it was found impossible either to seize the stone in the forceps or to crush it and extract it piecemeal. The patient died ten days later, and a stone was found weighing 44 ounces, and completely filling the bladder and the bony pelvis. Earle was at one time shown a calculus weighing 18½ ounces,

extracted by Cheselden. The patient died the following morning.

Mr. T. Holmes has recorded (*Trans. Path. Soc.*, 1870, vol. xxi., p. 267) the case of a calculus weighing 25 ounces, removed after death from the bladder of Sir Thomas Adams, a baronet, who died at Sprowston Hall, near the city of Norwich, during the reign of Charles II. The stone was of uric acid, and measured 12½ inches in its longitudinal circumference. Sir Thomas was able to be up and about until he met with an accident. He died at 81 years of age. The stone is now in the museum of St. Thomas' Hospital, London, of which institution he was president about the year 1662.

In the museum at Cambridge there is a 32 ounce calculus, taken from a woman who died about the same time. Mr. de Morgan describes two large calculi now in the Canterbury Museum, removed after death from the same patient, and weighing together 22½ ounces.

Mr. Holmes has also reported (*Trans. Path. Soc.*, London, 1874, vol. xxv, p. 181) a case in which unsuccessful attempts were made at both lithotrity and lithotomy, and the patient died the day following the latter attempt. A stone weighing 3,620 grains was found filling the bladder and the prostatic urethra. It was 3.8 inches in length, 2.8 inches wide and 2.6 inches thick. After all the soft parts had been cleared away from the pelvic bones, it was found just possible to push this stone out from the pelvis through its lower outlet.

Mr. Robert Hardey records (*London Medical Gazette*, 1826, vol iii., p. 569) the case of a man, æt. 66 years, from whose bladder he, after death, extracted a stone weighing 27½ ounces avoirdupois, its greatest circumference being 15½ inches.

Sir Henry Thompson reports (*London Lancet*, 1857, vol. ii., p. 474) the case of a patient, æt. 46 years, from whom, after death, a calculus was removed weighing 12 ounces, and measuring 9½ inches in its transverse diameter, and 10½ inches in its greatest longitudinal diameter. The nucleus was composed of uric acid, but the external layers contained urate of ammonium and phosphatic laminæ. He had urinary symptoms since he was æt. 15 years. Sir Henry Thompson remarked that when he came under his care, about nine months before his death, the idea of extraction was not entertained, because the stone was found to fill

the bladder completely. In a case recorded by Mr. Williams, a uric acid calculus, which weighed 25 ounces, and measured $10\frac{1}{2}$ inches in its long circumference, and $12\frac{1}{2}$ inches in its long circumference, was removed, after death, from the bladder of a gentleman æt. 81 years.

Dr. Augustus Browne records (*Trans. Path. Soc., London, 1868, vol. xix., p. 277*) the case of a man, æt. 42 years, who had symptoms of a stone in the bladder for 25 years, having been afforded relief only by drinking an extraordinary mixture of gin and beer. He died with symptoms of uræmia. The bladder was found contracted upon three calculi, the total weight of which was $1\frac{1}{4}$ pounds less 20 grains. Externally they seemed to be composed of triple phosphate.

Charles Monad has reported (*Bulletin de la Societe de Chirurgie, Paris, 1881, p. 762*) the removal of a stone weighing 1,950 grains, by supra-pubic lithotomy, in which case, the patient having nearly recovered, but a small, fistulous orifice remaining unhealed, one or two injections of tincture of iodine were used, being thrown into the small suppurating cavity situated behind the abdominal wall and communicating with the fistula. This was followed by erysipelas, and the patient died on the 40th day after the operation. The same surgeon records another case in which he extracted a stone 90 millimetres in length, 75 millimetres in width, and 58 millimetres in thickness, weighing 346 grammes, or about 5,200 grains. The patient died on the fifth day.

These cases sufficiently illustrate the history of the exceedingly large stones which have been mentioned in surgical literature as having been found after death, or as having been the object of unsuccessful surgical attack during life.

2. The second point to which I have alluded is the incarceration of the stone by means of such firmly organized lymph, and by such a projection of the mucous membrane around about it that it practically lay in a cavity of its own, communicating with the bladder by means of the aperture through which a portion of its convex surface protruded. The mode of formation of these cysts containing calculi is variable. In the majority of patients of the age of this one, it has always seemed to me probable that the condition was brought about primarily by enlargement of the prostate causing vesical hypertrophy with distention, and with the protrusion of the mucous membrane between the

fibres of the detrusor, which gives rise to the well known "sacculated bladder" of old people. Cross mentions a case in a man, æt. 84, where such a sacculus held a gallon.

These cysts thus formed have no muscular fibres, and, of course, no power of completely evacuating their contents, although they may do so partially by aid of the abdominal muscles. A certain amount of "residual urine," therefore, always remains in them, decomposing, throwing down a sediment, and setting up a catarrh, the mucus of which binds together the crystals and sedimentary deposit, forming the nucleus for the stone. In this instance, however, the symptoms date so far back into middle life (beginning when he was æt. 29 years) that this explanation hardly seems entirely satisfactory, and it appears more probable that the cyst was formed by the gradual sinking of the stone, as it grew, into a pocket made by its own weight, the hypertrophied and thickened mucous membrane rising above its borders and becoming fastened to it by lymph-bands.

According to Keyes, an encysted stone is either partially within the bladder and partly encysted, the neck of the cyst forming the obstacle to removal, or the orifice of the cyst is so small that to all intents and purposes the calculus is extravesical.

For the former set of cases, if the stone be of moderate size, and if the condition be discovered during a perineal lithotomy, after the part projecting into the bladder has been removed, or before, in some cases, the operator endeavors with his finger-nail, or a director, a searcher, a scoop, or other elevator, to dilate or slightly tear the neck of the cyst and work out the calculus. In this manœuvre, pressure upon the hypogastrium or through the rectum may be of great assistance. If moderate manipulation fails to dislodge the stone, a curved, probe-pointed, long bistoury may be used with great caution upon the finger as a guide, to cut moderately the constricted edge of the neck of the cyst in one or more places. Such use of the knife involves risk, and it rests with the operator to decide according to the circumstances of each case whether to assume the risk, or to resort to supra-pubic section.

In case of a large pouch connected with the bladder, and containing a small stone, the neck of the pouch may be dilated with the finger or small forceps, and the stone reached.

When the stone is practically outside of the bladder, or in a dilated ureter, some operators prefer to leave it untouched. Thompson acted in this way in the presence of a stone in the ureter. It is plainly the surgeon's duty to cut scantily in such cases.

That the incarceration of a calculus adds greatly to the difficulties of its extraction has always been recognized by lithotomists.

Mr James Miller, Professor of Surgery in the University of Edinburgh, described (*Monthly Journal of Medical Sciences*, 1848, p. 574) the removal of two stones, one of which, the size of an egg, was easily extracted, but the second was so encysted that great difficulty was experienced in seizing it, and the soft parts adherent to it had to be carefully stripped from it with the tip of the forefinger before it could be freed and removed. The patient died about a month after the operation from Bright's disease and pyelitis, and an abscess of large size was found in the right kidney.

Various proposals exist for dealing with encysted and sacculated stones. Littré advised seizing hold of the stone and cyst in the way described, and using it roughly, with the object of bruising the soft parts so as to cause suppuration in them, and disintegration of them; and with the hope of the stone (if not itself broken) becoming loosened during the suppurative stage, dropping into the bladder, and thence being extracted at another time.

Garengeot, with a bistoury, divided the neck of the sac, and then used forceps. Peyronie, LeDran, Marechal and others, have trusted to catching hold of the projecting part of the stone, and pulling violently, so as to detach it from its adhesions. Desault employed a concealed knife, or "coupe-bride," or "kystotome," for dividing the cyst. Among the older writers some have advised the stone to be left undisturbed, in hopes that the wound would heal, and that the patient would be left little worse, if no better, than when he was found.

Scheutzer (*Medical Chirurgical and Anatomical Cases*, London, 1758) details the case of a clergyman, æt. 60 years, who for twenty years had felt a pain in the urethra with some obstruction in making water. Stone being diagnosed, the operation for "its removal was performed according to the great apparatus." The operation was extremely tedious and difficult, but the stone was finally removed, after more

than an hour's efforts. It was encysted and projected from the bladder into the prostatic urethra. It weighed five ounces. The final result is not stated.

Dr. Newbigging reported (*Monthly Journal of Medical Sciences*, 1848, p. 690) a case of encysted stone in which the adhesions had to be stripped from it with the finger in the same manner before its extraction could be effected. The stone was of large size but its weight was not given. The patient recovered.

Mr. Fergusson reported (*Transactions of the Pathological Society of London*, vol. vii, p. 84) a case in which a small stone having been recognized and crushed, the patient died 20 days later. A stone the size of an orange was found at the autopsy in a cyst at the right side of the bladder immediately behind and above the prostate gland. The opening communicating with the cavity of the bladder was about the diameter of a sixpence. The patient had suffered with urinary symptoms for twenty-six years. Mr. Fergusson remarked that the specimen was interesting from the great size of the stone, from the length of time it probably existed in this situation, from the slight irritation it had caused, and, lastly, from the rareness with which calculi are found in this precise locality.

Mr. Henry Lee presented to the Pathological Society of London (*The Lancet*, March 29, 1862, 328) a calculus for the removal of which median lithotomy had been performed. The stone was found to be impacted and immovable, and could not be grasped by the forceps. Portions were broken off and at length were removed by the scoop. They weighed altogether nearly four ounces. The patient died three or four days afterward.

Mr. Erichsen reported (*The Lancet*, 1853, vol. i, p. 56) a case of encysted calculus in a patient who had had severe symptoms of stone in the bladder for several years. On several occasions Mr. Erichsen and his colleagues had heard the characteristic sound while the patient was being examined in the wards, but when he was placed upon the operating table, they failed to find it. He died about three years from the time he first came under observation, and a cyst was found upon the right side of the bladder containing two calculi, but the opening of the cyst was only large enough to admit the point of a middle-size catheter. Mr. Erichsen congratulated himself upon having adhered to the rule never to cut for stone unless the presence of the calculus shall

have been distinctly made out by percussion with the staff a few minutes before the operation. He adds: "The case which we have this day to bring before our readers offers a beautiful illustration of the soundness of the above-mentioned caution handed down to us by our forefathers, for the post-mortem showed very plainly that though there was really a stone in the bladder, none of the means at our command could have accomplished its extraction even with a very large incision." Like most of the authors I have quoted, he does not seem even to have taken into consideration the supra-pubic operation.

Mr. W. Cadge, in an article on sacculation of stone in the bladder (*The British Medical Journal*, October 2, 1875, p. 418), has called attention to the dangers of lithotripsy in such cases resulting from an injury to the walls of the bladder during the crushing, or the attempts at crushing.

3. As to the unusual size and weight of the calculus

The stones larger and heavier than this which have been successfully extracted are very few:

Le Cat has recorded, 1774 (*Philosophical Trans.*, London, vol. xi., p. 238), a successful operation on a boy, æt. twelve years, of a removal of a stone which filled the entire bladder, but does not give either its weight or dimensions.

In 1818, Charles Mayo, Esq., of Winchester, operated upon a man, æt. twenty-eight years, and extracted a stone of fourteen ounces and two drachms, avoirdupois; it measured eight and a half inches in its smallest circumference, by rather more than ten in the largest, and broke into several big pieces in the attempts to extract it.

Mr. Dickinson, of England, successfully removed, from a man æt. sixty-two years, a calculus of a globular shape, composed chiefly of phosphate of lime, and which weighed eleven ounces. It broke into several fragments, which were taken away piecemeal. The operation was followed by sloughing of the rectum, and when the case was reported, several months afterward, a small fistulous opening still existed between this cavity and the bladder.

HICCOUGH.—Dr. Brinkerhoff writes to the *N. Y. Med. Jour.* that calamus is an excellent remedy for hiccough. He has used it in some cases of an aggravated nature, and always successfully. Only a small quantity is needed.

Selections.

A Regional Study of Tumors.

BY W. L. RODMAN, M.D., LOUISVILLE, KY.

[Read at the May (1890) Meeting of the Kentucky State Medical Society.]

My subject, "A Regional Study of Tumors," is certainly a practical one, and one which, at times, is of interest to all physicians and surgeons.

Important as it is, there is not, it is strange to say, a treatise upon the subject in any language. I wrote to all the publishers of this country for such a book, if there was one, and received the same answer from all of them. I have not, after diligent search, been able to find even so much as an article in a medical journal upon the subject.

If writers would give the same attention to all of the important surgical regions as Dr. S. W. Gross gave to one of them—the mammary gland,—order would in time soon come out of what is now little more than chaos. This short paper is simply written in the hope that some one worthier than I, feeling the same interest in the subject, will give it proper elaboration. Statistics are yet to be made. If the record-books of all hospitals and college clinics contained a full history of tumors, and the diagnosis in each instance confirmed by a competent microscopist, it would not be long before we could, in nearly all instances, determine the nature of the neoplasm by the age of the patient, the situation of the growth, etc., before its removal.

Such knowledge would be a blessing to those surgeons who, while skillful with the knife, are not microscopists, and are oftentimes so situated that the aid of one can not be invoked.

The patient is entitled to a reasonably accurate prognosis—the relations often demand it; and no surgeon at all jealous of his reputation will give one, in the majority of instances, without availing himself of every means of diagnosis at hand. One may blindly predict that a tumor of the scalp is a sebaceous cyst, that one growing from the inner condyle of the femur is a sarcoma, and nearly always he will turn out right. The same would, to a less extent, be true of other regions prolific in morbid growths, if proper attention was given them.

I begin with the

SCALP.

By far the most common tumors of the scalp are the three forms of cystic tumors, viz.: (1) cutaneous sebaceous cysts, (2) congenital dermoid cysts, (3) serous cysts.

1. Of these, the first is much the commonest, and is popularly called a "wen." They are single or multiple. Professor Gross saw a man with more than two hundred. They vary in size from a buckshot to an orange. They are more common in women than in men, seventy out of one hundred and seven consecutive cases reported by Bryant being in women. Unquestionably they are hereditary. Sir James Paget says, "They are more commonly hereditary than any forms of cancer." They are more common after thirty years of age. The scalp over these tumors is either partially or wholly bald. Three-fourths of all sebaceous tumors are on the head and face.

2. Congenital dermoid cysts are sufficiently often met with to be of interest. Its favorite site is about the eyebrow, at the outer angle of the orbit; it is also found over the frontal bone, behind the ear, and over the anterior fontanelle. In the last situation a cyst of this kind has been mistaken for a meningocele cut off from the cranial cavity. They are deeply placed, usually attached to the periosteum, and by prolonged pressure may indent or even perforate the bone. This is especially true of those situated at the outer angle of the orbit.

3. Serous cysts are extremely uncommon. There are, according to Treves, "either (a) congenital, (b) formed from extravasated blood, or (c) formed from a meningocele whose connection with the cranial cavity has been cut off." They are unusually small, and situated over the occipital region. Billroth saw a cyst of this kind as large as the patient's head.

Vascular Tumors.—Next in frequency to the cystic are the various forms of the vascular tumors or nevi. They are by far more common here than in any other situation. According to Haineke, arterial angioma are found only in this region.

Another interesting but rare form of vascular tumor is the venous, which communicates at times by one, again by several openings through the skull with the superior longitudinal sinus. Fortunately, they are extremely rare, and

will be found in the middle line over the longitudinal sinus. Surgical interference is out of the question, unless it be to make systematic compression.

Before leaving soft tumors of the scalp, the occasional existence of a meningocele or encephalocele is not to be forgotten. The most common situation is at the point where the four centers of ossification of the occipital bone come together. They also occur at the anterior fontanelle, above the nose, and in the parietal regions.

Solid tumors of the scalp are uncommon. They are lipoma, fibroma, general or circumscribed hypertrophy of the scalp, elephantiasis or, as some call it, pachydermatocele, and sarcoma and carcinoma.

Lipoma, fibroma and pachydermatocele are all very uncommon. I have never seen an instance of either, nor are there many cases on record.

Sarcoma and carcinoma occur more frequently, but they, too, must be classed as rare affections. I have witnessed two examples of each. Both of the carcinomas were of the epithelial variety. This is the usual form of cancer. I find one case of scirrhus reported.

The bones of the scull may be the seat of ivory exostoses, ordinary or syphilitic. The former are more likely to occur on the outer and the latter on the inner table.

Sarcomata also grow from the bones, but, as a rule, begin in the perscranium.

PAROTID GLAND.

Tumors of the parotid are not uncommon. Gross gives the record of ninety-five cases collected by Billroth, Burns and Weber, the diagnosis in all instances being confirmed by the microscope. Adding to these two cases in my own practice, one of which was an enchondroma larger than a fist, removed four years ago from a man still living in Cloverport, Ky., the other a cyst, removed from a middle-aged man from Knoxville, Tenn., who presented himself at the University clinic, we have 29 chondromas, 20 fibro-myxo-chondromas, 26 carcinomas—9 of which were encephaloid, 10 epithelial, and 7 scirrhus—6 fibromas, 6 cystomas, 4 melanotic adeno-sarcomas, 3 sarcomas, and 3 myxomas.

Taking the 29 pure chondromas and 20 fibro-myxo-chondromas, and we have 49, or 50.51 per cent. of all tumors of this gland of a cartilaginous nature. The cancerous

tumors are next in frequency, comprising 26.78 per cent.

Specimens of mixed neoplasms are very frequent in this situation.

The benign tumors, which comprise 67.04 per cent., are movable, grow in early and middle life; the skin over them is not discolored, have little tendency to cause pain, and do not cause paralysis of the facial nerve. The converse is true of the malignant growths.

Sir William Ferguson, whose experience with these tumors has been larger than any other surgeon, says: "If it were evident that the tumor slid freely over the subjacent textures, I should not hesitate about using the knife, whatever might be the bulk of the disease; * * * but if the tumor seemed fixed, its limits not clearly defined, or an attempt to move it caused pain, I should not readily be induced to use the knife, however small the mass might be."

SUBMAXILLARY GLAND.

Enchondroma, fibroma, adenoma, lymphoma and cysts are the benign growths most likely to be met with in this gland. Sir James Paget asserts that enchondromas are not so common in this gland as they are in the parotid—others claim that they are more so.

Of malignant neoplasms we find sarcomas, lympho-sarcomas, and carcinomas, the latter being rare and usually of the scirrhouus variety.

SUBLINGUAL GLAND.

The only growth which frequently affects this gland is "ranula."

Epithelioma is the only form of malignant disease, and it is infrequent.

Calculus formations are rare. Gross, in his large experience, saw only one case.

Dr. Cheatham sent me a married woman, about forty-five years of age, from whom I removed a very large calculus found in a ranula. It was removed two years ago, and a part of the cyst excised. No recurrence to date.

AURICLE.

The tumors occurring in this situation are the fibro-elastic or keloid, fatty sebaceous, hematoma auris, nevus, sarcoma and epithelioma. Of these by far the most common is the first, or fibro-elastic tumor. It grows from the lobule of the ear, varies in size from a pea to a hen's egg, is very

hard and dense, and of slow growth. It is most common in negresses, and is undoubtedly, in most instances, due to the irritation of heavy and irritating ear-rings. For this reason it is uncommon in men. Fatty tumor is very rare, though it has been found. The same may be said of sebaceous cysts, and also of sarcoma.

A very interesting tumor is the hematoma. It usually begins in the concha and spreads over the auricle. Dr. Ahn finds that it is almost peculiar to the insane. In 24 cases 23 were in insane persons. Nevus is very rare. Epithelioma may occur in elderly persons.

LIPS.

Tumors of the lips are common. The most frequent is the small mucous cyst which is almost peculiar to the lower lip.

Next in frequency are the different forms of vascular tumors, and they are almost entirely limited to the upper lip.

Epithelioma is common enough. It is an interesting fact that this affection is nearly always situated in the lower lip. Of 560 analyzed by Gross, only 20, or 3.5 per cent., appeared in the upper lip.

In 150 of his own cases, Gross only saw it in the upper lip twice. Bryant places the relative frequency of the disease in the two lips as 25 to 1. I have never seen it in the upper lip. Epithelioma is by far more frequent in males than in females, the proportion being 17 to 1. It is rarely seen under forty-five, being pre-eminently an affection of advanced age. The theory so long fashionable, that it is caused by smoking short-stem pipes, is perhaps untenable. The majority of authors are against this opinion.

MAMMARY GLAND.

If tumors in other regions of the body had been studied and classified with the same care as those of the mammary gland, there would be little left to be desired.

S. W. Gross, who has written the best work in any language upon the subject, has made the simplest, and at the same time the most rational classification of these neoplasms, based as it is upon a sound anatomical and clinical foundation.

Of benign tumors of the mamma we find fibroma, myxoma, adenoma, and cysts, retension, and of new formation.

While lipoma and enchondroma both occur in the para-mammary tissue, they do not occur in the gland itself, and will not be considered. Of malignant growths there are sarcomata and carcinomata.

The statistics collected by Gross show that of 649 cases of mammary tumors, 530 were cancers, 57 sarcomas, 48 fibromas, 2 adenomas, and 12 cysts. So we have 81.66 per cent. cancerous, 8.75 per cent. sarcomas, 7.38 per cent. fibromas, 0.30 per cent. adenomas, and 1.84 per cent. cysts, or over 90 per cent. malignant, and 8.52 per cent. benign.

Age has a most potent influence in determining the nature of a mammary growth. S. W. Gross says: "The non-carcinomatous growths occur, on an average, at the thirty-third year; only 30.37 per cent. can develop after the age of forty." They develop during the activity of the gland; "15.55 per cent. appear before the twentieth year, and 5.18 per cent. before menstruation."

"The carcinomatous tumors develop, on an average, at the forty-eighth year; 77.26 per cent. appear after the age of forty, and they are never met with before the twentieth year." So that these growths occur with the decline in the function or atrophy of the breast.

The only tumors we find before the sixteenth year are the fibromas and sarcomas, the former occurring six times as frequently as the latter.

In conclusion, to quote still further from Gross, "Structural perfection of the mamma renders it most obnoxious to fibroma, sarcoma, and adenoma, while atrophy or decay predisposes it to myxoma and carcinoma."

A word as to the part of the gland which is invaded by neoplasm. Carcinomas are usually situated at the upper and outer margin of the gland, and about the nipple. Non-carcinomatous growths are generally situated at the upper and inner margin of the breast, and but rarely grow around the nipple.

AXILLA.

Before enumerating the neoplasms which have their origin in the axilla, it should be borne in mind that abscesses both acute and chronic are frequently situated in this locality, also tuberculosis of the lymphatic glands. Aneurisms are not uncommon, and such surgeons as Syme, Dupuytren, Desault and Ferraud have mistaken them for

neoplasms. The result was fatal in every instance save one. Then again, the subclavian has been ligated for a supposed aneurism, when the real trouble was a pulsating sarcoma.

The tumors met with in this situation are fatty, cystic, sarcomatous and carcinomatous. The malignant are more common than the benign. Fatty tumors sometimes attain an enormous size; perhaps the largest on record being reported by Dr. A. H. Scott, of Arkansas. It reached below the ilium, was pyriform in shape, and when removed weighed twenty-one pounds.

Cystic tumors are frequently congenital, contents serious and coagulable. Notwithstanding the abundance of hairs in this situation, sebaceous cysts are almost if not entirely unknown.

Sarcomas originate in the connective tissues and also from the lymphatic glands. At first freely movable, they soon become fixed. The superficial veins are prominent—tendency to ulceration is marked.

Gross claims "that carcinoma of the axilla is always the result of secondary involvement in connection with carcinoma of the breast." Erichsen recognizes the fact that scirrhous cancer may begin as a primary affection under the pectoral muscle or in the axilla.

I myself have seen a well-marked example of a scirrhous tumor in the axilla of a man beyond sixty years of age. The tumor was removed, but reappeared in three months. The patient lived in an adjoining State, and the subsequent history is unknown to me.

In the removal of malignant tumors in this situation the fact is not to be lost sight of that the attachments are deep, and not infrequently the sheaths of the blood-vessels are adherent to the growth.

SHOULDER.

Tumors in the region of the shoulder may be divided into two classes, those beginning in the soft tissues around the joint, and those growing from the humerus, scapula and clavicle. The former are almost invariably benign, the latter are certainly malignant.

Of the benign tumors growing in the soft tissues around the joint, we most generally find chondromas, fibromas and lipomas. The former acquire an enormous size, often weighing twenty-five pounds, and, in rare instances, fifty.

Fatty tumors are common. They also may attain con-

siderable volume. They are not so easily enucleated as in other situations, being at times quite adherent to the surrounding tissues. Two years ago I removed a large lipoma from over the shoulder of a middle-aged man. It was quite adherent to the surrounding tissues, requiring a tedious dissection for its removal. Cysts and erectile tumors are very rare; the latter, when they occur, are aneurismal or venous.

The one tumor which often springs from the bones of the shoulder is the small, round-celled or encephaloïd sarcoma. It is exceedingly malignant. The points of diagnosis are rapid growth, apparent fluctuation, and prominence of the superficial veins. Of this frightful disease I have seen two instances, both in females. One a widow, twenty-two years of age, who fell upon the ice, striking her shoulder a severe blow. This was the starting-point of the sarcoma, which began in the head of the humerus. A spontaneous fracture of the bone occurred a few weeks before the limb was amputated at the shoulder-joint. This is not uncommon. The second case was in the person of a married woman, about forty-five years of age, whom I saw in consultation with my cousin, Dr. W. B. Rodman. This lady moved away from Frankfort, where she was then living, but I heard from her frequently. She survived less than a year. Enchondroma sometimes grows from the upper end of the humerus, beginning either centrally or subperiosteally. This, in fact, is one of the favorite seats of the chondroma. It is likely to undergo sarcomatous degeneration.

ABDOMINAL WALLS.

Tumors of the abdominal wall are usually of a fatty, fibroid, cystic or sarcomatous nature. They may be superficial to or beneath the muscle—rarely between them.

Those superficial to the muscles are, as a rule, fatty. Sometimes these tumors, when situated near the middle line, may communicate by a small opening with the abdominal cavity. The possibility of this should be remembered. The slow and painless growth, lobulation, etc., render the diagnosis sufficiently easy.

In 1862, Nélaton described a fibrous tumor which he had in fifteen instances found growing in the iliac fossa. The tumor was dense and inelastic, usually situated just above Poupart's ligament, and attached to the anterior superior spinous process of the ilium, or thereabouts, by a dense

fibrous band. They are beneath the muscles, between the peritoneum and the iliac fascia.

Cystic tumors in this situation are rare. When existing they are deeply placed just external to the peritoneum. They are supposed to develop from the fetal urachus. They contain a serous fluid and attain a large size. They may simulate ascites.

Sarcoma is uncommon. In the few cases where it has been observed it is rather deeply placed, either between the planes of muscles or beneath them. Being malignant in character, they frequently form adhesions to the abdominal viscera.

In the removal of all tumors of the abdominal wall, more especially the deeper ones, as small an incision as practicable should be made, the muscles carefully stitched so as to prevent ventral hernia.

BACK.

Tumors of the back are benign and malignant—most usually benign. Fatty and fibrous are more frequent than others. Cystic tumors are rare. The peculiarity of both fatty and fibrous tumors of the back is that they are large and pendulous. The former grow from the superficial connective tissues; the latter from the deeper ones beneath the muscles. A fatty tumor weighing twenty-five pounds was removed from the back by Dover.

Sarcomas are rather uncommon, and when they do occur are apt to grow in the interscapular region.

Cancer is still more uncommon. When it exists it is of the epitheliomatous nature, and may spread over a large extent of surface.

GROIN.

Of tumors liable to occur in this interesting surgical region, the fatty, fibrous, cystic and sarcomatous are the most common. Varix of the saphenous vein at its opening into the femoral may also occur. So may aneurisms of different kinds.

The fatty tumor of this situation may begin above in the abdominal wall and descend into the groin. They are usually large and pendulous, and enucleated with little hemorrhage. The fibrous tumors are, as a rule, more deeply attached, and consequently difficult of removal. They may be attached to the vessel. There are no less than three different classes of cystic tumors liable to occur

in the groin: 1. Retention cysts, as the sebaceous, which are rare. 2. Exudation cysts, as the enlargement of the bursa lying between the interior surface of the capsule of the hip and the posterior surface of the psoas and iliacus muscles. This is by far more common, and at times undergoes great enlargement. 3. Cysts of new formation, either serous or sanguineous.

It is to be remembered, in connection with the diagnosis of tumors in the groin, that there are other "swellings" which are even more common than the tumors named. Acute and chronic abscesses which point either above or below Poupart's ligament, hydrocele of the cord, hernia, undescended testicle, aneurisms, tuberculosis of the lymphatic glands, etc.

A cystic or solid tumor situated over the course of the vessel will have an impulse imparted to it, and the tumor may be mistaken for an aneurism. Extreme caution is necessary for the correct diagnosis and removal of growths in this region.

TESTICLE.

This organ, like the female breast, is frequently the seat of morbid growths. The tumors commonly found are cystic degeneration, enchondroma, sarcoma and carcinoma. Myomata, lipomata and fibromata are reported, but are so rare as to make it unnecessary to consider them in a practical study of the neoplasms of the testis.

Given a tumor of the testicle, the chances are, as in the mamma, that it is malignant. Simple cystic degeneration sometimes, though rarely, occurs. The cysts are multiple and generally of great number, varying in size from a pin's head to a walnut. Contents watery or gelatinous. This is the "hydrated testis" of Sir Astley Cooper.

Cystic disease sometimes co-exists with sarcoma, chondroma and carcinoma.

Enchondroma.—The parotid and submaxillary glands are the only structures of the body more often the seat of this tumor than the testicle. It is liable to undergo sarcomatous change. It also co-exists with cystic disease.

Tuberculosis.—This affection generally occurs in young subjects with evidences of tuberculosis elsewhere. Rarely is it limited to the testicle. It almost invariably affects the epididymis, and not the testis proper.

Sarcoma.—This is the most common of all tumors. It is

usually of the small, round-celled variety, the encephaloid sarcoma. It is impossible to diagnosticate this growth from the encephaloid carcinoma without the aid of the microscope. After a study of forty cases, S. W. Gross says that it affects younger subjects, even occurring in very young children, grows more rapidly, attains a greater volume, is more apt to invade the epididymis, more apt to cause enlargement of the inguinal lymphatic glands, but less apt to invade the cord, than carcinoma.

Carcinoma.—Most authors agree that the only variety of cancer found in the testicle is the encephaloid—the old fungus hematodes. It is most common about forty years of age, and is said never to occur in impubic subjects. It is invariably unilateral. Bryant and Holmes admit the possibility of scirrhus.

Tumors of the perineum must be extremely rare, as I find no mention of them in the standard works.

The only tumor I have ever met with in this region was a fibroma of many years' duration, in a man sixty-seven years of age, whom I saw in consultation with Dr. H. M. Pusey. It was the size of an orange, and had grown very slowly. Six months before its removal it had taken on a more rapid growth, and the skin over its surface became discolored. A microscopical examination showed a limited amount of sarcomatous degeneration, the cells being of the small spindle variety. It was removed by Dr. Pusey two years ago, and, so far as I know, has not returned.

PENIS.

This organ is not often the seat of neoplasms. Benign growths, both cystic and solid, may occur, but they are so very rare that they need not be considered.

By far the most common growth is the carcinoma, and some authors claim that the only form of cancer to which the penis is liable is the epithelioma. It begins as a small wart or crack either upon the prepuce or glans penis. It soon ulcerates, and can be diagnosticated by the offensive serous discharge, involvement of inguinal glands, pain, age of patient, etc. It is more common in elderly subjects. I have seen one case in a lad of fifteen, though it is uncommon under thirty-five. Erichsen and Corte have seen scirrhus of the penis. It was situated in the solcus behind the glans.

Sarcoma is extremely frequent. Dr. W. G. Porter, of Philadelphia, reported a case of sarcoma beginning at the base of the penis of a negro aged forty-four years. This is the only case I find.

POPLITEAL SPACE.

Tumors of this region are cystic and solid—more frequently the former.

Cystic tumors of this region are classified as follows:

1. Enlargement of some one of the natural buræ.
2. Synovial cysts, caused by hernial protrusion of the synovial membrane.

3. Accidental cysts, serous or sanguineous.

The first class is the most common. Enlargement of the bursa situated between the inner head of the gastrocnemius muscle and femur is the largest and most common of these tumors. Next in order of frequency is the one situated between the tendon of the semi-membranosis and its insertion into the tibia. The bursæ on the outside of this space are smaller and less often enlarged.

Of solid tumors in this space we have sarcomas, fibromas and lipomas. The sarcoma is most frequent. It frequently pulsates, and for this reason the femoral artery has often been tied for the relief of a supposed aneurism. The benign tumors are rare. Fatty tumors here often assume the form of myxoma-lipomatodes. The frequent occurrence of politeal aneurisms and deep-seated abscesses in this region should make the surgeon extremely cautious in dealing with any tumor.

Dupuytren, Desault and others have opened aneurisms in this situation under the impression that they were abscesses. I know of one such mistake necessitating ligation of the femoral artery.

Leaving the soft parts, we turn to the bones of this region.

The lower end of the femur, the condyles, and the upper end of the tibia are frequently the seat of enchondromas and sarcomas. Both of these diseases are more likely to grow from the inner aspect of the joint, the classical site of the sarcoma being the internal condyle of the femur.—*Am. Pract. and News.*

Varicocele.

The pathological condition known as varicocele is a very common one. Many men have it without knowing the fact and without suffering from it directly or indirectly. It very often happens that exceedingly circumspect and moral men consult physicians because of this condition of affairs, and especially when the sum total of their sexual indulgences has not exceeded a modest limit. These men are slow to believe that moderate indulgence in intercourse does not affect the testicular structure nearly so harmfully as does the more conservative habit of so associating with females as to secure and maintain a prolonged erection without seminal discharge. The effect of this custom on the part of those hair-splitting moralists who draw the line at indulgence is more frequently afterward made manifest in nervous derangements, prostatorrhea, involuntary emissions, etc., than are they in those who are apparently less moral, but really are no more sensuous.

Varicocele is much more common among those who abuse their procreative organs by unnatural methods than among those who indulge beyond the healthful limit in the natural way. Yet there is no question but that more are affected among the habitues of easy-virtue resorts than is generally supposed. Varicocele is a very natural pathological state, and it is caused by simply overwork. The excessive demands upon the procreative powers are complied with in so far as the system can comply. Blood is sent to the generative organs in liberal amounts. In fact, so much blood is sent them that the venous system is not able to return the impoverished stream, and as a result the muscular coat gives way, and you then have the "bag of worms."

Various operations have been suggested for the cure of this not dangerous and not harmful condition. Several operations looking to the destruction of the enlarged veins and depending on the collateral circulation to equalize matters have been devised. My experience has not been wonderful, but it has been sufficiently ample to satisfy me that most of such operations are failures. The occasional severe neuralgia produced by the ligation or undesirable cicatricial involvement of a nerve renders the operation at least not without danger. The fact that competent operators have included the cord in the ligature also suggests that the operation is not one of before-breakfast ease. The curtailment

of the scrotum has for its object the support of the distended veins, and is a sort of perpetual suspensory, and is probably the best operation of the lot when any operation is called for. But it is very manifest that this operation does not alter the morbid condition of affairs. No enlarged vein is made smaller, and such a thing as the enlarged veins being brought back to their original calibre by pressure is out of the question. So then, this last best operation looks simply to the comfort of the patient, and really only tends to relieve the heavy dragging pain, while it does nothing by way of cure. Then is there any cure worthy of the name? To which the answer must be, usually, no. Once in a long while a case will present itself which calls for an operation, because the causes have been kept operating so long that the testicle has become badly affected, and if the veins are destroyed and the circulation cut down, destructive action may cease, but these cases are rare.

The man who comes to you with a well-developed case of varicocele, complains of a dragging pain in the testicles, weak back, etc., seldom needs any operation. He needs to be told that he has been making a fool of himself, aided or unaided. That if he will get a well-fitting suspensory, and wear it, he won't have the dragging pain. He also should bathe the scrotum in cold water night and morning. But more than all, he should avoid dalliance with women whose sense of propriety is among the lost arts. He should not indulge in sexual intercourse oftener than the good sense of his medical adviser suggests. Under no circumstances whatever should he abuse his procreative powers or over-tax them without any regard to time, opportunity or place. If he will observe these directions, he will have no trouble with his varicocele. Of course, it will stay right with him. It will not get well of its own accord no matter how virtuous he may be. Nature suffers under many violations, but there are some offenses she punishes severely, and varicocele is one of the results when transgression is costly. The bridges are burned, and there is no balm in Gilead that quite reaches the case.

I have known some very clever medical men who sought to cure the victims of their own vicious practices by cutting the veins of the testicle, and then expect that the patient would at once become well and robust. The folly of such a view is apparent, and the practice is on a par with the idea of giving the bromides in doses sufficiently heroic to control

seminal emissions, and thereby give the organs a rest. The Lord knows they often need a rest, but they don't need it any worse than lots of medical bunglers need arrest. Vigorous men of mature age will have seminal emissions unless they have sexual intercourse, and the giving of bromides in any doses compatible with health, will not prevent nature from so doing. Then don't attempt to do the impossible, for you will fail, and in that failure you lose the confidence of your patient, and in the end you will lose your grip. Mrs. Partington proposed to keep back the Atlantic Ocean's tide with a broom, and two continents laughed at the folly; but there are medical Partingtons who are trying to correct the injuries wrought by self-abusers upon themselves, by cutting or tying the veins of the scrotum—a task no less nonsensical than Mrs. Partington's. These cases are capable of rational treatment. That they do not get it from the regular profession accounts for the bank accounts of the quacks. He was right who said "A little learning is a dangerous thing."

J. A. DEARMAND, M.D.

Davenport, Iowa.

—*Medical Brief.*

Digitalis in Veratrum Viride in Pneumonia.

FAILING heart-power is always an indication for digitalis. That the action of digitalis be better understood, let us compare it with veratrum viride.

In the early stage of pneumonia the pulse is full and strong, the fever high and the capillaries of the affected lung dilated and turgid with blood. Under these circumstances veratrum is of service.

In the first place, it depresses and quiets the heart, it reduces the arterial pressure and drives the blood into that territory where resistance to blood entrance is slight. But it does more than this. It builds up the capillaries all through the system. You will remember that the relaxed vessels of the abdomen are of such size that they are capable of holding all the blood in the body. You can put all the blood of a man, after death, in his abdominal vessels, and they will not be over-full. Now when, under the influence of a dose of veratrum, the heart has been lowered in power and the whole abdominal cavity has been opened wide, there is then a great suction of blood away from this lung. The blood that fills and chokes up this territory

goes off to the abdomen, and you thus get an effect which, in days gone by, our ancestors got by the use of the lancet.

You depress but do not exhaust the patient. Bear in mind, depression is not exhaustion—that depression is the strong man's safeguard, that exhaustion is his danger. But let the case go along. Soon there is consolidation.

There comes an outpouring of plasma; all these capillaries are pressed upon—practically they are obliterated; and if a whole lung is obliterated, as sometimes happens, there is only half communication between the right and left sides of the heart. Do you not see that, under these circumstances, the right side of the heart is placed under a perpetual strain, and that the strain increases all the time, from a little failure of this moment to throw back a little blood into the venous system and at the next moment a little failure to throw an increase of blood to the venous system?

You give a full dose of digitalis, and continue its use until you have some evidence of its presence. The effect will be that the right side of the heart will begin to beat slowly and with long pauses. There is a driving force behind the blood, which throws it through this narrow channel, fills up the left ventricle and restores the balance of the circulation. You can not do this with any remedy so well as you can do it with digitalis. It is more powerful than any other, though slow in action. Alcohol does not do this. Alcohol is a stimulant to the general system. It acts on the heart, but less powerfully than digitalis. Therefore in advanced pneumonia there is no remedy that will replace it. Give it freely for effect, give it freely and watch the pulse; when you have a distinctly digitalis pulse, reduce the dosage, but increase the dose of digitalis when the action begins to wane.

Digitalis is useful in advanced stages of typhoid fever, when the pulse fails. It is useful in any acute disease when the pulse fails. But remember always that experiments have shown that a very high temperature renders the system less liable to the action of digitalis. It is not true that digitalis will not act with a high temperature. I have over and over again seen it act with great power in cases in which the temperature was 105°. This high temperature simply makes the heart more rebellious; it does not suspend the activity of the digitalis.—Dr. H. C. Wood, *Lecture, Un. of Pa.*

How to Increase the Population in France.

THE Paris Academy of Medicine has been lately listening to some learned and lengthy communications made by Dr. Lagneau, on the insignificant increase in the population of France. The author has suggested a number of measures to counteract this evil tendency in the life of modern France (*Bulletin de l'Académie de Médecine*).

1. To restrict celibacy and illegitimacy he advises that the numerous and onerous formalities exacted by the present marriage law should be greatly simplified, especially where the contracting parties are of different nationalities.

The limit of protection to the young girl should be extended from sixteen to twenty-one years of age; that is to say, to her majority. The seducer should be compelled to support his illegitimate child for a certain number of years, as provided by the laws of nearly all the European and American governments.

A special tax ought to be levied on bachelors over twenty-five or thirty years of age, the money so raised to go to the support of illegitimate children of unknown paternity. This suggestion is evidently based on the assumption that married men are all virtuous, and, if carried out, would doubtless lead to the establishment of Bachelors' Mutual Protective Associations.

The maternity hospitals should keep the young women much longer after confinement than they do at present, in order to prevent uterine affections, a frequent cause of subsequent sterility.

A better surveillance should be exercised over contagious disease, and especially syphilis, so often the cause of infecundity and stillbirth.

The time spent in the army should be materially shortened by teaching the boys in the schools the art of war from the age of sixteen to seventeen.

2. To restrict sickness, mortality, and stillbirth, he suggests that mothers' meetings or work-rooms ought to be established, where the girl-mother, deprived of employment on account of her condition, can earn enough for the support of her child. If the mother is indigent, means should be given to her to enable her to nurse it, and not oblige her to hand it over to the administration.

He further urges that it is necessary to enforce the law in regard to adequate protection of infants.

To insure the carrying out of general sanitary measures, especially in the thickly populated districts, where tuberculosis and typhoid fever are rampant.

That rural camps for soldiers take the place of filthy city establishments.

To enlist for the colonies the indigenous population, and not the natives of France, who so readily succumb to yellow fever, cholera, typhoid fever, etc.

To counteract the steady drift of population from country to city.

The development of colonies is also advised, and with it the multiplication of commercial relations, which would tend to increase natality and incite to emigration.

The 1,115,214 foreigners permanently residing in France should be naturalized as promptly and as completely as possible, so that they would share the expenses of the country with the others.

While some of these measures are sensible and seem quite practicable, others savor strongly of Utopia. The latter class will hardly appeal to the intelligence of French legislators, who will doubtless be called upon to take action by the committee appointed by the Academy to examine anew this whole subject. It certainly must be of the utmost importance to contemporaneous France to prevent a further falling away of her population. A power that means to retain its place in modern Europe needs able-bodied citizens, both of the military and civilian order. As Bismarck once put it, in the European fish-pond of to-day there are so many hungry pikes that it will not answer to be a merely edible carp.

Lessons in Anthropometry.

THE *Provincial Medical Journal* has lately given some attention and considerable space to the discussion of a letter with which it was favored, as to the "best way" of making young people tall. The inquirer is snubbed in the beginning of the discussion by being reminded that there is a passage in the Scriptures in which we are informed that a man can not, by taking thought, add a cubit to his stature.

We are then informed that: "In spite of all the labors of Quetelet, De Quatrefages, Edmund Parkes, and fifty other authorities on anthropometrical science, very little is

known as to the causes which makes some men tall and others short. Climate is asserted to play an important part. This is very doubtful, for some of the tallest races inhabit very hot climates. The hill country of India produces huge men. Many of the African tribes are of colossal proportions, and the South Sea Islanders are conspicuous for their immense stature. The Japanese are shorter than the Chinese, the Chinese than the French, the French than the English, the English are smaller than the people of the United States, and the latter conspicuously inferior to the Tonga Islanders. Race is a very important factor, though the influence of race is very irregular in its operation, and may show itself in the absence of short men, or in a high average stature; and in one case known to us a lofty average stature is accompanied by an almost entire absence of tall men. Every one must have noticed the high stature of the English upper classes, who are several inches taller than their poorer brethren. A glance at any regiment will enable most of the officers to be spotted at once, and any large gathering of the clergy is conspicuously taller than one of non-conformist ministers. Town residents average an inch less than the rural population, thus showing the part which bad air and insufficient exercise play. It is known with absolute certainty that lads sent to work at an early age in factories and shops, or, for that matter, even in the open air, have their growth affected, the cause of this being that the immature frame can not resist the double strain of growth and work. A sufficiency of good food is admitted to be an important factor in developing growth, and all outdoor muscular exercises are good, providing that the system is not overtaxed by hard work and long confinement."

The average heights of the men of various nations are quoted from the tables of M. de Quatrefages, giving the standard of the Bosjesmans as 4 feet 6 inches; Mincopees, 4 feet 8½ inches; Lapps, 5 feet; Cochin Chinese, 5 feet 2 inches; Peruvians, 5 feet 3 inches; Malays, 5 feet 3 inches; Native Australians, 5 feet 3½ inches; Cingalese, 5 feet 4 inches; the Southern French and the Chinese, 5 feet 4 inches; the French working classes generally, 5 feet 5½ inches; the Northern French and the Arabs, 5 feet 5½ inches; the Russians and the Austrians, 5 feet 6 inches; the Germans and the upper French classes, 5 feet 6½ inches, which is also, according to him, the average of the people of Madras, the Belgians, and the English; the

Roumanians and the Kabyles, 5 feet 7 inches ; and, though surely this must be a mistake, the Sepoys of Bengal reach 5 feet $8\frac{1}{2}$ inches.

To come to what may be looked upon as tall races, the Polynesian and the Pitcairn Islanders are stated to average 5 feet 10 inches ; the Ojibbeways, the Agaces of the Pampas, the Kaffirs, and the Marquesas Islanders reach 5 feet 11 inches ; the New Zealanders touch 6 feet, while the Patagonians range from a minimum of 5 feet 10 inches to a maximum of 6 feet 4 inches. The highest place of all on the list is given to the Schiffer and the Tongatabuan Islanders, who have an average of 6 feet 4 inches.

Now these are interesting particulars, but it seems to us that the *Provincial Medical Journal* fails to suggest an answer to the question put by its correspondent. We are persuaded, too, that the inquirer is rather unceremoniously silenced by the scriptural quotation. Evidently the man wanted to add a cubit, more or less, to his son's stature, not his own ; therefore he can hardly be declared to be forbidden by Holy Writ to exercise the faculties that he wants to. Moreover, the question is simply asked, " Which of you, by taking thought," etc.; and nowhere do we find it stated, " Thou shalt not take thought," or words to that effect. The reply that " race is a very important factor " is interesting, as well as concise, but it is a hopelessly disappointing answer to the question of the anxious father of a short son ; for we are very certain that neither by taking thought nor by administering medicine can a fond father change the race of his son. If the son is already there, no answer in the world could be more discouraging. But in the very measure of the improbability that a man can lengthen either himself or his son to any considerable degree, it is probable that he can produce some little effect upon his great-grandson.

The solution to the original question may be found in certain observations, particularly among the negroes of the West Indies. It is well known that the climates of these islands are quite similar ; but the soil and vegetation differ in very marked degree. Now, the pure negroes, who are descended through lines of several generations that have lived in the West Indies, differ greatly in feature, shape and temperament from their prototypes in Africa. Again, it is observed that they differ particularly in size and shape from each other, in accordance with the nature of the soil

of the islands from which they happen to hail. Those, for example, whose native soil is particularly calcareous, are tall, raw-boned, sturdy fellows, able to withstand great hardships. On the other hand, the natives of soils that are poor in calcium, show it in their bones, at least after a couple of generations. Their limbs are more gently modeled; they are more graceful of stature, less hardy, and of lower average height. It is hardly probable that much calcium would make a short boy tall; and we are quite sure that it would be worse than useless for a man whose ambition lay in the direction of tall sons to feed them on calcium. At the same time it is evident that the soil, and the food that is indigenous to it, are important factors in determining to what height the sons of man shall rise. And it is well to preach to over-anxious parents a little of the gospel of humble acquiescence in the decrees of a "divinity that shapes our ends."—*Ed. in Med. Record.*

The Propriety of Operative Interference in Gunshot Wounds of the Abdomen.

BY DWIGHT DICKINSON, M.D., SURGEON, U. S. N.

THE following notes may assist in determining the propriety of operative interference in cases of gunshot wounds penetrating the abdomen.

On the evening of January 26, 1890, J. R. S—, U. S. N., white, a strong, healthy young man, twenty-one years of age, received a gunshot wound in the abdomen while under the influence of alcoholic drinks and engaged in a fracas ashore at Vallejo, Ca¹.

The patient was helped by his comrades into a small boat and taken across Napa Creek to his vessel, the U. S. Receiving Ship Independence.

When first seen by a medical officer, at 6:15 P.M., one hour after the receipt of injury, a circular opening was found in the abdomen, large enough to admit the tip of the little finger, one-half inch below, and two and one-half inches to the left of the umbilicus. The respirations were thirty per minute, pulse changing from one hundred and twenty to one hundred and forty. There was no marked bleeding from the wound. The urine was drawn by catheter, and found of normal character. Patient vomited, several times,

glairy mucus. On account of shock it was at first deemed advisable to postpone operative interference. Hot bottles were applied to feet, and a subcutaneous injection of sulphate of morphine, one-fourth grain, administered.

The symptoms of stupor and weak, frequent pulse not disappearing, the restlessness and respiration increasing, an explorative laparotomy was decided upon, and, assisted by several raval surgeons, I performed the same three hours after patient was wounded.

The incision reached from just below the umbilicus, in the median line, to about one and a half inch above the symphysis pubis. After opening the peritoneum a moderate amount of blood escaped. The intestines were carefully drawn out and examined for perforations. They were kept covered by towels wrung out of hot water while exposed. As far as the examination went, there were twelve perforations of intestines and omentum. Those of the former were closed by Lembert's sutures. One of the perforations had injured a large mesenteric artery, which was bleeding freely on exposure. This was ligated and the bleeding stopped.

During the operation the patient's condition grew alarming. The respiration reached sixty, and the pulse about one hundred and eighty and feeble. At this stage it was decided to discontinue the search for further perforations. The intestines were sponged off and returned. Three deep and three superficial sutures, a drainage-tube of hard rubber, iodoform, antiseptic gauze and cotton, held in place by bandages, finished the dressing of the wound. Patient was put on a dry mattress and made comfortable.

In the following night patient gradually rallied from the operation and the stupor vanished. He was given occasional doses of Magendie's solution of sulph. morph., and ice pellets relieved the retching. No stimulants were needed. After the operation the patient vomited blood once.

January 27th.—Morning temperature, 98.6° F.; pulse, one hundred and forty; respiration, thirty. Is perfectly conscious and rational. Urine drawn off by catheter. Complains some of continuous pain in abdomen, at times very severe. Dressings not disturbed. Hypodermic injections of sulph. morph. one-sixth grain. Iced milk in small quantities. Temperature remained normal during the day, respirations about thirty per minute. Pulse showed a tendency to become more frequent and weaker. In afternoon

commenced stimulants. Brandy, half ounce, every hour. Extremities warm all day.

Evening: Drainage-tube removed and soft rubber one substituted. Discharge serous.

January 28th.—Patient died at 4:25 this morning, of heart failure, thirty-two hours after operation. Autopsy, at 1:30 P. M.: Found a moderate amount of bloody serum in abdominal cavity. No blood. Recent adhesions of small intestines. The intestines above injury distended with gas. Two openings in small intestines were discovered which had not been closed at the time of operation. The bullet—calibre thirty-two—was found buried in muscular structure just above right great sciatic notch, the track being downward, backward, and to the right. Bladder uninjured.

Although the patient lived but thirty-two hours after the operation, I think the latter can be called a partial success, from the fact that he rallied and regained consciousness. I am convinced that the hemorrhage from the mesenteric artery was sufficient to have destroyed life very soon had the vessel not been tied.

The advantages claimed are, that by regaining consciousness the patient could have made a will had he so desired, he could have given testimony relative to the shooting, and he could make religious preparation for death. The last-mentioned act was done.—*Med. Record.*

Gunshot Wounds of the Stomach and Intestines.

SENN (*Journal of the American Medical Association*, September 6 and 13, 1890), in a valuable paper on gunshot wounds of the abdomen, draws a number of conclusions, of which the following are the most important:

1. In gunshot wounds of the abdomen, in the absence of faecal extravasation or prolapse of the omentum, it is absolutely necessary to determine whether penetration has taken place, by enlarging the wound.

2. Absence of visceral lesions requiring abdominal section is most frequently met with in perforating gunshot wounds of the abdomen if the wound of entrance is at or above the level of the umbilicus, and if its course is antero-posterior.

3. In transverse and oblique gunshot wounds at a point below the level of the umbilicus, multiple perforations of the intestines are extremely probable.

4. The general and local symptoms, with the exception of external faecal extravasation, are absolutely of no value in the differential diagnosis between simple penetrating gunshot wounds of the abdomen and those complicated by visceral lesions.

5. Dangerous internal haemorrhage caused by perforating wounds can be recognized by the symptoms of acute anaemia and by the physical signs of fluid in the peritoneal cavity, and such symptoms and signs are positive indications for abdominal section.

6. After opening the peritoneal cavity for the treatment of haemorrhage, temporary haemostasis should be secured by digital compression of the aorta, or by packing with sponges, until the bleeding points can be found.

7. Wounds of the stomach and intestines large enough to permit the escape of the contents of these organs can be infallibly demonstrated by the hydrogen test before the abdomen is opened.

8. Direct distention of the stomach through an elastic tube is preferable to rectal insufflation, when it is probable that the stomach is wounded.

9. Thorough insufflation, without evidences of free tympanites or escape of gas through the external wound, proves either the absence of perforations, or that, if present, they are too small for leakage to take place, and is a strong argument in favor of non-interference.

10. The hydrogen test should invariably be used in searching for perforations after the abdomen is opened, as this test makes extensive eventration unnecessary, and never fails to reveal every perforation.

11. After the lowest perforation has been discovered by rectal insufflation, the succeeding tests should be made through the perforations, and the external wound should never be closed until the entire gastro-intestinal canal has been tested.

12. The hydrogen test ordinarily does not cause faecal extravasation.

13. By following the indications furnished by the test, the surgeon relieves himself of all medico-legal responsibility in the operative treatment of gunshot wounds of the abdomen.

14. The closure of bullet wounds of the stomach and intestine is accomplished most speedily, and with a sufficient degree of safety, by one row of interrupted sero-muscular

sutures of fine aseptic silk. The operation should be undertaken as early as possible.

15. If enterectomy is unavoidable, the continuity of the intestinal canal should be restored by making lateral anastomosis between the closed ends by means of decalcified, perforated, moist bone-plates.

16. Flushing of the abdominal cavity is to be reserved for cases in which the peritoneum has been contaminated by the escape of the contents of the stomach or intestines.

17. Drainage is necessary if the peritoneum has become infected, and in wounds of the kidney, spleen, or pancreas not treated by partial or complete extirpation. Also in wounds of the liver.

18. The necessary diagnostic skill and manual dexterity in the operative treatment of gunshot wounds of the stomach and intestines can be acquired only by experiments upon the lower animals.

Proceedings of Denver Obstetrical and Gynecological Society.

PRESIDENT DR. T. H. HAWKINS IN THE CHAIR.

DISCUSSION OF DR. SHOLLENBERGER'S PAPER ON SPONTANEOUS ABORTION.

Dr. Shollenberger, in his paper on abortion, spoke of it as of frequent occurrence, and of its serious effect on the future health of the mother. That primarily, it was of more frequent occurrence with multiparæ than with primiparæ. That frequently it occurs in the first few weeks of pregnancy, unknown to the patient. That the accident occurred more frequently between the second and fourth months than any other time. He mentioned the causes of abortion as being exciting and predisposing. Among the causes mentioned being the health of either parent, acute diseases, death of the foetus, disease of the uterus and placenta, nervous shock and alcoholic excesses. Accidental physical causes were also mentioned. Under the head of symptoms, he stated that there were very few reliable premonitory symptoms, as indications denoting the commencement of abortion were often the first intimation that abortion was threatened. The rational symptoms are pain, hemorrhage and evacuation of the liquor amnii. The discharges should always be care-

fully examined, so as to assist in making a clear diagnosis. The positive diagnosis is at times a very difficult one, the physician not being positive that pregnancy really exists. Of course, after dilatation has taken place, especially if the membranes protrude, a correct diagnosis can then be established. If the hemorrhage and pain are excessive, if clots are expelled, and the os dilated, the diagnosis of abortion should present no difficulties. The prognosis must necessarily always be guarded. It is necessarily always fatal to the foetus, and we can never be positive what the ultimate result will be to the mother. In the line of treatment, several indications were mentioned, among them being the prophylactic. Correct the habit of aborting and all constitutional taint of either parent. Should all the symptoms of abortion be present, there are two indications, viz., to arrest the accident, and if this be impossible, to cause expulsion of the foetus, and its appendages, as soon as possible. The patient should be compelled to remain in the recumbent position, and morphia, chloradyne, or other sedative given, either hypodermatically, or by the stomach. In the use of opium, care must be taken, on account of its effects on the stomach and bowels, in producing vomiting and constipation. If the accident can not be prevented, the ovum should be removed as soon as possible. Hemorrhage should be arrested by vaginal tampon of cotton, soaked in glycerine or sweet oil. This will also usually effect dilatation; if not, can use laminara, or sponge tents. The vaginal tampons should be allowed to remain in situ, about six to ten hours.

The cases which give the most trouble are those in which the foetus is first expelled and the placenta and membranes remain. In such cases, did not believe in the expectant plan, but uterus should be emptied of its contents at once. If necessary, the patient may be anaesthetized, so that the cavity of the womb can be thoroughly explored. Use curette, if necessary. Should teach women the danger that may follow and keep them in the recumbent position at least as long as at delivery at full term.

Dr. Rothwell: I have been much interested in the reading of the paper by Dr. Shollenberger. The subject is a very important one. The paper has covered the ground so thoroughly that there seems but little to add. However, I have jotted down a few points while listening to it. First, I think that occupation is a frequent cause of abortion. For

instance, women in the rural districts of Germany abort more frequently than their sisters in the cities, no doubt due to the fact that the female peasantry of Germany are accustomed to labor in the fields. In this country, city women abort more frequently on account of the debilitating effects of city life. Anæmia is a not infrequent cause of the trouble as is instanced by the frequency of miscarriages in malarial regions where anæmia is common. Uterine affections, especially retroflexion or retroversion with adhesion, are responsible for many cases. Excessive coition by maintaining congestion and hyperæsthesia of the genital organs predisposes to abortion. Among the polygamist Mormons of Utah, sexual intercourse during pregnancy is prohibited, and consequently abortions among them are noticeably uncommon. There is not much danger from haemorrhage where the os is not dilated, but I always tampon when the os is dilated for fear of haemorrhage. Have seen cases, occurring in the mountains, three or four days after the accident, and after emptying the uterus the cases did well, showing clearly that there is no immediate danger from sepsis. Had but one case die in the mountains; in this case the placenta had been retained in the uterine cavity one month before the woman had any medical attendance. If the cervix is not dilated I sometimes use tents as dilators. After removing the secundines I have been in the habit of giving an antiseptic douche (bichloride of mercury). If the patient has no rise of temperature, the one douche is sufficient. The after-treatment is the most important; keeping the patient quiet and using quinine and ergot daily. In removing the placenta I administer chloroform, introducing the hand into the vagina if necessary, and use my finger, for I find it better than any instrument I have tried.

Young physicians as a rule, I think, are too anxious and do too much.

Dr. Taylor: My experience does not agree with that of Dr. Shollenberger, as to the relative frequency of abortions in multiparæ and primiparæ; or at least I am sure I have seen it more common in women who have never been delivered of a child at or near term, although having had one or more abortions. Of course, if a woman is predisposed to abortion, this accident is likely to happen during her first, and still more during succeeding pregnancies. I agree with Dr. Rothwell in his views of coitus as a cause of abortion, and I always

warn those who have formed the habit of aborting, or have symptoms of aborting, on this point.

In regard to the diagnosis, the doctor did not mention Hegar's sign, which is perhaps the most valuable sign of pregnancy at an early stage.

In the treatment of abortion, the division which the doctor makes into cases where there is hope of saving the foetus and into those where there is not, is very practical and necessary. And right here let me say that we should be very slow to decide that there is no hope of arresting a threatened abortion. In my student days I was taught that if haemorrhage co-exist, the case is hopeless, but I have known several cases in which very considerable haemorrhage and pains co-existed in which by energetic treatment the abortion was prevented. I quite agree that morphia is the most efficient medicine for controlling the pains, but I think it should be pushed more energetically. Instead of an eighth of a grain by the stomach, I should prefer a fourth of a grain hypodermically, and if that does not control the pains within three-quarters of an hour, I would give an eighth of a grain more. In a case where a number of abortions had occurred, notwithstanding great precautions, I lately put the woman upon a course of the double chloride of gold and sodium, and had the satisfaction in due time of delivering her of a child at term.

When the foetus is cast off, leaving the membranes behind, we have a dangerous condition, for although they remain in utero until they become spontaneously detached without harm, yet there is danger that poisonous germs may gain entrance to the cavity of the uterus and set up septic processes which may terminate fatally. In such a case ergot should be given to free the uterus from clots and favor the detachment of the membranes, and when indications of sepsis arise the membranes should be at once removed, by the finger if they can be readily reached, though I prefer to use a blunt curette rather than introduce my hand into a vagina which has never been distended by a child's head, if the secundines could not otherwise be reached.

Dr. Lobingier: I am sure I can join the gentlemen in commending the paper. I would mention a few causes in addition to those already given, namely, acute diseases, and especially the exanthematous fevers. Excessive purgation from any cause may predispose to abortion by exciting uterine contractions from over-straining and excessive

peristalsis. High altitude may be cited as another cause predisposing to abortion. It has been observed that women residing in the Alps abort more easily than those in the low lands. Statistics would doubtless show the same to be true on the Rocky Mountain plateau. The phenomenon is probably due to congestion from over-action of the heart.

Hyperæmia of the pelvic area from a mechanical cause, such as heavy clothing supported from the waist, may be mentioned as a common and pronounced predisposing cause to abortion. The practice of wearing heavy skirts bound tightly about the waist can not be too freely condemned in pregnant women.

In the treatment, I would not agree with Dr. Taylor in the use of morphia. This might be employed in the start to secure an impression, but I would follow it with powdered opium in the form of rectal suppositories, with two grains to the suppository. Fl. ex. of viburnum in half drachm doses is valuable as a later and more permanent sedative.

Antiseptic measures can not be too strictly enforced. The liability to sepsis either by infection or from decomposing substances is always imminent.

Should it be found impossible to arrest an incipient abortion, I would resort to rapid dilatation and removal of the contents of the uterus. Dilatation may be safely and speedily accomplished by Barnes' bags or by the tampon. In tamponing. I prefer the connected or chain tampon, owing to the facility with which it may be withdrawn. Instead of using sweet oil as Dr. Schollenberger has suggested, I would soak the tampon in borated glycerine. The latter acts blandly on the mucous membrane and is aseptic as well as antiseptic, whereas a vegetable oil such as has been mentioned, will decompose immediately and form a nidus for germs.

When dilatation has been accomplished, I would empty the uterus with the finger as suggested by Dr. Rothwell, instead of employing the curette. This may be done with perfect safety to the parts, whereas the curette is not invariably a safe instrument to use.

Dr. Pershing: The diagnosis between over-due menstruation and an early abortion may at times be very difficult. The patient may fully believe that she is aborting at the eighth or ninth week, the os may be softened and dilated by a clot, the discharged clots may very closely resemble

fragments of decidua, and yet all of these phenomena be due simply to disordered menstruation.

A recent case of this kind made me almost sure that I had an abortion to deal with, yet a careful examination of every napkin used, and the after history, showed conclusively that the patient had not been pregnant. I agree with Dr. Taylor that it is best to postpone active interference in a case of impending abortion until the last possible moment. Even when there has been a good deal of hemorrhage and some pain, opium and rest may cause both to subside and a perfectly healthy child may be delivered at full term.

The use of sponges as a material for the tampon and of tents of any kind ought to be avoided, on account of their liability to cause abrasions and septic infections. Only when the os is closed and the uterus must be emptied without further delay are tents advisable, and then as a choice of evils.

An important point made by Goodell is that when the secundines are partially detached the hemorrhage may be very alarming, but that is all the more reason for going ahead boldly and completing the operation, for then the hemorrhage will usually subside.—*Western Medical Reporter.*

Pathological Objections to Curetting the Uterus in Puerperal Fever.

A recent suggestion to curette the uterus in puerperal fever appears both unnecessary and pathologically unjustifiable. This fever is a septicemia, in no way specific or different from general wound sepsis, and may be said to occur as sapremia or as septic infection.

In the sapremic form the putrefactive germs admitted into the genital tract during labor rapidly multiply in the lochial discharges (themselves innocuous) and in the contused or abraded mucous surfaces. These special germs of putrefaction are saprophytic, and speedily perish in the blood, and are powerless to attack living tissues. The discharges become offensive, and if partially retained give rise to constitutional symptoms. It is, however, only the chemical products and not the organisms themselves that invade the system and cause the sapremic form of puerperal fever, the intensity of which is directly proportionate to the dose of

chemical poison absorbed. If the dose be a large one, the most severe symptoms of acute septic poisoning may set in and rapidly culminate in death. Certain post-mortem appearances are found, but no micro organisms have been discovered in the blood, and the blood is not infective. The onset of the fever is indicated by a more or less rapid rise of temperature. There is usually no rigor, and the disease is non-infective. The obvious treatment is to remove the putrefactive material supplying the poison, and this can be done efficiently by intrauterine antiseptic irrigation, inasmuch as the bacteria do not exist in the living uterine tissues. Curetting alone is useless, and if with irrigation unnecessary; and further, by creating a fresh breach of surface for absorption, may be an actual source of danger. Curetting can only be of service for the removal of portions of putrefying placenta or decidua.

In the second form, or sept'c infection, micro-organisms again play an active part, but are pathogenic. They invade the living tissue and increase in the blood, causing fever of a well-known intensely contagious type. The nature of the virus is unknown, and though micrococci and streptococci have been found in all the organs secondarily affected by puerperal fever, they do not exist as a separate species like the tubercle bacillus or bacillus subtilis. The germs are introduced into the genital tract by the surgeon's hands or instruments; and should putrefaction of the lochia coexist, they find a suitable nutrient material for development, or attack the injured tissues whose vitality and resisting power are lowered. They invade the system through the lymphatic or venous channels, or by extension along the planes of connective tissues. The constitutional fever may be accompanied by localized pelvic cellulitis or pelvic peritonitis, or by acute septic infection of the whole peritoneum (diffuse peritonitis) and distant complications. The local uterine affection may be insignificant and not indicated by the lochia, death resulting from acute disintegration of the blood causing collapse. "The condition of the lochia is not of any diagnostic or prognostic import; it merely indicates the state of the inner surface of the uterus, and not always that. Altered uterine surface need not reveal itself in altered lochial secretions, and serious diseases may be present where the flow appears healthy, while decomposed lochia do not always prove that infection has occurred."

Infected puerperal fever is ushered in by a rigor more or

less severe, followed by elevation of temperature, indicating the invasion of the system by the virus of infection. Here it is needless to point out the inutility of curetting. Once systemic septic infection has occurred, no local treatment whatever will prevent the multiplication of the virus in the blood; nor do we possess any specific able to counteract or destroy the infective organisms so admitted. Thorough antiseptic irrigation of the uterine cavity and vagina alone avails, and even this ceases to be of much importance after a few days.

Beyond, therefore, thorough asepticity of the hands and instruments during labor, and of antiseptic syringing of the vagina, both before examination and after parturition, especially important when discharge of meconium has occurred, we have no direct operative means of preventing septic intoxication or infection. When this has been done, Spiegelberg declares it "bad practice to irrigate," except on the definite indications of putrefying matters in the parturient tract or the supervention of pyrexia.

The basis upon which the suggestion to curette is founded, that of an analogy between the puerperal uterus and chronic endometritis, is by no means a good one. It should be rather compared to a large flesh wound, as an amputation or compound fracture.—E. T. COLLINS, M.D., in *Lancet*.

Microscopy.

Synopsis of a Course in Microscopy for Pharmacists.

BY DR. H. M. WHEPLEY, F. R. M. S.

Read before American Pharmaceutical Association, Old Point Comfort,
Va., 1890.

THE following synopsis is intended as a guide for a course of home study, and not such work as can be followed in a College of Pharmacy, where students receive individual instruction, and have the benefit of object lessons. The nature of a paper for this organization must confine it to limits which will prevent my giving an introduction to the subject.

Unfortunately for the pharmaceutical profession, we have no works upon the subject of microscopy which can be taken as text-books for home instruction. There is a rich

supply of works on microscopy as applied to medicine; several volumes have been written for the microscopist who works in chemistry, and the number upon the use of the microscope in the study of botany is not small; we even find works devoted to the application of microscopy in petrology, and I hope that it will be at no far distant day when the literature of pharmacy is enriched by suitable works upon microscopy for the use of the druggist.

In order to fully appreciate and take advantage of the microscope as applied to pharmacy, the druggist must be quite proficient in botany and pharmacognosy; in other words, he must have the advantage of home reading or a pharmacy college training. At the present time all of the leading colleges of pharmacy in this country have departments devoted to instruction in microscopical work, but those who graduated a few years ago did not have the opportunity of such training. Many of those who graduate at present overlook the value of microscopy while they are students, and defer the study until they have left college and engaged in business.

Although the educated pharmacist has quite an advantage over his less fortunate brother when he takes up the study of microscopy, the same as he has in the daily pursuits of his vocation, still the druggist whose opportunities for study have been very limited, can advantageously follow out a course of home study in microscopy. The work with the microscope can be taken up in connection with pharmacognosy, chemistry and other studies which the home-educated pharmacist must pursue.

One of the branches of an elementary education which is usually overlooked in our colleges of pharmacy is physics. I find that the average student has received but a very meagre training in the branch during his school days. An understanding of the general principles of physics is of value to every individual, and especially so to the pharmacist. In order to intelligently work with the microscope and comprehend the principles upon which it is constructed, a person must be familiar with at least that branch of physics known as optics. Therefore I recommend that every person taking up a course of study in microscopy shall first familiarize himself with optics. The chapter upon this subject given in the works on microscopy is scarcely sufficient for the purpose; it is much better to study some work devoted to the subject of physics. Chapter VII in Nor-

ton's Natural Philosophy is a very good course upon the subject. The chapter upon Optics in Steele's Fourteen Weeks in Physics is also of value.

After mastering the principles of optics, it will be in place to take up the study of the microscope as an optical instrument. The student will soon learn that microscopes are divided into two great classes: Simple microscope and compound microscope.

It is best for the home student to confine his first work to that which can be accomplished with the simple instrument. It is advisable to purchase Manipulations of the Microscope by Bausch, which is a fifty cent book; also a volume entitled, How to Work with the Microscope, by Phin; a new edition has just been issued, and sells for one dollar and twenty-five cents per copy. Simple microscopes are not very expensive, so that a druggist can afford to purchase a good one with three separate lenses; they range in price from twenty-five cents to two dollars and fifty cents.

After purchasing the instrument and reading what is said upon the subject in the works just mentioned, the druggist is ready to commence practical operations. It is not advisable to begin by studying drugs and objects the structure of which is not familiar, but examine such things as the integument on the palm and back of the hand, the print of the newspaper, the web of cloth, and similar familiar objects. After the student has become familiar with the changed appearance of such objects when seen under the simple microscope, he can take up less familiar substances, such as seeds, leaves, roots, powders, crystals, etc. The hairs found upon many of the vegetable drugs are very interesting and instructive, as they serve as one means of identification of the substances. After considerable practice in this line of work, the student is ready to take up the alphabetical list of substances in the U. S. Pharmacopoeia. A simple microscope will enable him to observe the microscopical character of a large number of this list. The hairs on nearly all of the leaves are characteristic. The warts, wrinkles, ridges, hairs, scales, scars, etc., on branches, barks, rhizomes, roots and other parts of plants, often serve as a means of identification. Those drugs which consist of whole or parts of flowers are also suitable for microscopical examinations. There are also some of the pharmaceutical preparations, such as mercurial ointment, mercury with

chalk, etc., where the pharmacopœia directs the use of a microscope in testing their value.

The student should not become too ambitious and anxious to handle the compound microscope before he is perfectly familiar with the use of the simple instrument.

There are other uses in a drug store for the simple microscope than the examination of drugs; I may mention its convenience in making out the number of a prescription given upon a soiled label, and numerous other opportunities will present themselves to the observing pharmacist.

When the pharmacist is ready to buy a compound microscope, it is advisable to purchase a good stand, if it can possibly be afforded. This will enable him to add accessories in the future as time, inclination and financial condition may suggest or permit. The cheapest compound microscope which can be made of service in a drug store will cost about twenty-five dollars. The instrument known as the Library Microscope, manufactured by the Bausch & Lomb Optical Co., is supplied with one-fourth inch and one inch objectives, which give a magnifying power ranging from eighty to three hundred and seventy-five diameters; this microscope sells for twenty-five dollars, and is as cheap a one as I would advise any pharmacist to purchase. Fifty dollars will secure a very fair outfit, given one-fifth and three-fourth inch objectives, which are the ones most generally used by the pharmacist. If the student can possibly afford it, it is better to invest about seventy dollars, and secure a good stand with one-fifth and three-fourths inch objectives. Such an instrument is sufficiently complete to admit of the use of almost any accessories which a pharmacist will ever have occasion to use. As an example of a microscope for this price I will mention the Griffith Club Microscope, which is very convenient for the use of druggists. Unless a pharmacist feels inclined to be lavish in the investment, it is not necessary to purchase a microscope costing more than from seventy-five to one hundred dollars. Of course, the accessories may amount to an equal sum, but it is not advisable to have too many of them, while learning to use the instrument.

When commencing work with the compound microscope, it is better to learn to manipulate the stand with eye piece and objectives before any accessories are added. The books which were recommended for use in studying the simple microscope are still more serviceable and essential when it

comes to manipulating the compound instrument. In addition it is advisable to read one or both of the microscopical journals published in this country: *The Microscope* of Trenton, N. J., and *The American Microscopical Journal* of Washington, D. C. The subscription price is one dollar per year, the same for each publication. The student will also naturally be interested in the departments devoted to microscopy in the various pharmaceutical journals.

In commencing work with the compound microscope, it is best to follow the same plan as suggested for the simple microscope, and first study familiar objects. Among these suitable for the compound microscope we have the various fibres, such as wool, silk, cotton, and linen: every microscopist should be able to identify each one of these fibres. Small seeds, hairs, and even the dust which collects in a room, are suitable for study. When it comes to the study of less familiar objects, we have those mentioned while referring to the simple microscope, and in addition to the list come various kinds of starch grains, powdered drugs, and other substances which require no section cutting in order to be examined.

It is not advisable to attempt the preparation of permanent mounts for the microscope until the student becomes quite familiar with the examination of objects. By this time another work will prove of service to the pharmacist, and that is *The Practical Microscopist*, by Davis, the price of which is two dollars and fifty cents. As an aid and guide in the study of powders, I call attention to articles by Hans Wilder, entitled "Microscopical Examination of Powders" (*American Journal of Pharmacy*, June, '90, page 278, July, '90, page 332.) Another source of valuable information on the subject is Bulletin No. 13, issued by the Division of Chemistry of the Department of Agriculture of the Government; parts I, II, III, IV, and V, are all of interest to pharmacists, but it is part II that treats of the examination of powders. The bulletin is entitled "Food and Food Adulteration," and can be obtained by addressing the Secretary of Agriculture. These publications by the Department of Agriculture are intended for the use of the citizens of this country, and I hope that the pharmacists will see that good use is made of them.

If the student can afford the expense of a polariscope (which costs from twelve to twenty dollars, and can be used with the seventy-five dollar outfit), it is advisable to purchase

one when this stage in his study has been reached. The polariscope is especially serviceable in the examination of starch grains, crystals, and many other substances.

The student is now ready to take up the work of mounting specimens for examination and preservation. It is best to commence with the preparation of dry mounts, such as are made with the use of paper covers. Then come dry mounts with the use of cements. I consider a turn-table essential to the outfit of any one who prepares permanent mounts; it not only enables him to make more elegant preparations, but saves time and trouble. After learning to prepare dry mounts, the use of balsam, both hard and soft, is next in order. Those who have access to the Companion to the U. S. Pharmacopœia will find the chapter on the subject of Microscopy very instructive when they come to the use of balsam, glycerin jelly, or glycero-gum, and other mounting media which require similar technic. The use of balsam should be studied before passing on to mounts made in liquids. The preparation of mounts in liquids is more difficult than in the foregoing media. Glycerin, carbolic acid and creosote water, castor oil and other liquids used in mounting, all require about the same work, and can be studied together.

After gaining proficiency in mounting specimens, the student should take up the work of section-cutting. It is best to commence with free-hand work, such as cutting soft vegetable tissues imbedded in elder-pith. It is very convenient to be able to make such sections, and sometimes circumstances are such that it is necessary to make them free-hand with a razor, or not at all. If the student does not practice this before he commences the use of the Microtome, he will never learn the art. An ordinary potato is a very good substance to practice upon for free-hand section-cutting. The first work of the Microtome should be on such substances as rhizomes of ginger, calamus, podophyl-lum, etc., which can be imbedded in paraffin or similar imbedding substances.

We next come to the section-cutting of hard vegetable tissues like Pareira Brava, which requires special soaking, but no imbedding. Cutting sections of fruit stones, coral, minerals, etc., are not in order. They require the use of a saw and grindstone.

The student is now ready for the more difficult task of sectioning animal tissues and spongy vegetable substances,

which are best imbedded in celloidine. I find that it is better for the student to learn to make sections and carefully handle them, before he attempts to mount specimens which require sectioning.

An artistic talent is not the good fortune of every one who studies microscopy, but any one can learn to draw more or less correctly what he sees under the microscope. The practice teaches the student to closely observe what he sees. I advise the student to commence drawing at the first lesson.

The use of the microscope in urinary analysis is work suitable for the pharmacist, but requires special instructions from teachers or books.

It is the duty of every one who works with the microscope to start a cabinet of permanent mounts. Whenever the microscopist is mounting a substance, he should make several preparations, so that he can select the best one for his cabinet and exchange the less desirable ones with his brother microscopists. For use in examining drugs, it is well to have mounts of the true drugs and also of substitutions which are known to be used as adulterants.

Pharmacists who have not already done so, should study the illustrations of the microscopic appearance of drugs as given in Maisch's Organic Materia Medica and the Dispensaries, as well as other works on pharmacognosy.

The pharmacist who has time and inclination will profit by work in photo-micrography. An article on this subject was presented to the Association last year by W. H. Krug and A. B. Stevens (A. P. A. Proceedings '89, page 84).

Another duty which devolves upon the microscopist is to associate himself with local organizations. This can be done in every case where there are two or more pharmacists working with the microscope.

If space would permit, it would be interesting to dwell upon the large field for individual and original work which presents itself to the student who makes use of the microscope in pharmacy. The pharmacist who accomplishes most with the microscope will be the one who sets apart a certain amount of time each day or week for the use of the instrument. There is an infatuation about the use of the microscope which sometimes leads the microscopist to devote more time to the subject at one sitting than can be afforded, so that the instrument must be set aside and neglected for some time to come. There-

fore I advise every pharmacist who takes up the study of microscopy to lay out a schedule of work, and follow it as closely as circumstances will permit.

In conclusion, I must state that system and order are of as much value to the microscopist as any workman. It is best to have a table, closet or box for the accessories and reagents, so that they may be kept together. The microscope is very conveniently kept under a bell-glass, so that it is always ready for use at a moment's notice.

Gleanings.

LASSAR'S TREATMENT FOR BALDNESS.—First stage: A strong tar soap is applied to the scalp for at least ten minutes. Second stage: Removal of soap by a tepid water douche, the water to be gradually cooled, the scalp to be well dried afterward. Third stage: The scalp to be shampooed with the following solution:

R,	Hydrarg bichlorid,	gr. x.
	Glycerini,	
	Spirit rect.,	aa 3 ij.
	Ad. destil.,	f 3 v. M.

Fiat solutio. Sig. for external use.

Fourth stage: Shampooing of head with absolute alcohol, to which one half per cent. of naphthol has been added. Fifth stage: The following solution to be well rubbed into the skin:

R,	Acid salicyl.,	gr. xxx.
	Tinct. benzoin,	f 3 j.
	Ol. ped. taur. ad.,	f 3 iij. M.

New Eng. Med. Monthly.

OBSTINATE INSOMNIA.—A case of obstinate insomnia yielded promptly to the beneficial influence of Peacock's Bromides. One ounce taken in thirty-drop doses at bedtime effected a permanent cure. The patient is now in good health, now two months since last dose. I shall continue to prescribe it in similar cases, and am very much pleased with its action in every case in which I have used it.

L. M. WRIGHT, M.D.

RIVALRY.—Bob—My dad's a squire, and gets his name in the papers every day.”

Tom (contemptuously)—“That's nuthin. My dad took Jink's liver pills, and got his picture in the paper.”

CREASOTE IN DIABETES.—The *Lancet* says, two cases of diabetes have been treated with excellent results by Valentini, by means of creasote administered internally. In one case, four drops per diem were given at first, this quantity being afterwards increased to ten drops. Under this treatment the sugar disappeared, and did not return when the patient began to eat starchy food. The other patient was given six drops per diem, and did equally well.

TREATMENT OF DYSENTERY.—Dr. L. H. Davis writes to the *Memphis Med. Monthly*, stating that he has found the following combination for a suppository very efficacious in acute dysentery. He uses it after a saline aperient, and has found it more successful, in quite a number of cases, than any other treatment. He says it has proved especially applicable when an irritable stomach was present from the first, thus preventing the satisfactory use of ipecacuanha:

R.—Cupri sulphatis,
Zinci sulphatis,
Morphiæ sulphatis, aa gr. ij.
Plumbi acetatis, gr. iv.
Ol. theobrom, q. s.
M.—Ft. suppos. No. viii.

Sig.—One to be introduced as indicated, or after each action of the bowels.

He usually follows the saline by the internal administration of tincture of nux vomica and quinine, and a restricted diet.

A SUCCESSFUL NEW DRUG.—An efficient Emollient and Sedative is one of the chief indications in the treatment of the urinary tract.

Among the remedies employed for this purpose, PICHI (Fabiana Imbricata) has through long clinical testing won an enviable place.

The demand for this drug and the difficulties of obtaining proper supplies have led to the appearance in the market of much Pichi of inferior and therapeutically useless quality.

Parke, Davis & Co. state that they employ a special agent in the habitat of this drug to collect supplies, and guarantee its quality. They will also on request supply samples to those physicians who desire to clinically test it in their practice.

FOR IRRITABLE BLADDER.—Dr. W. P. Chunn writes to the Maryland *Medical Journal* that the following prescription has been found to allay incessant desire to urinate, and irritable bladder, when due to phosphatic deposits in the urine:

R.—Acidi benzoici,	3ij
Sodii boratis,	3ij
Aquæ f	3xij

M. Sig. Tablespoonful three times a day.

This mixture has upon two occasions acted so efficiently in what was thought to be cystitis that cystotomy was dispensed with.

TURPENTINE.—Turpentine acts upon the skin as a rubefacient. It possesses, also, marked antiseptic powers. The ointment has been used successfully as a local application in erysipelas, alopecia circumscripta, and is sometimes of service in psoriasis.

We select the following two formularies from Dr. J. B. Shoemaker's "On Ointments and Oleates":

R	Pilocarpine Hydrochlor.,	grs. v
	Unguent. Terebinth.,	3ss
M.	For alopecia and chronic circumscribed eczema.	
R	Citrine Ointment,	3ss
	Oil of Juniper,	3ss
	Turpentine Ointment,	3ss
M.	For psoriasis, chronic eczema and alopecia.	

THE CERTAINTY OF THE DOCTORS.—"But, doctor, you said last week that the patient would certainly die, and now he is perfectly well." "Madame, the confirmation of my prognosis is only a question of time."

Book Notices

THE SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia, and One of the Obstetricians to the Philadelphia Hospital. Second Edition, Revised

and Enlarged. Illustrated with 239 Wood Cuts and a Colored Plate. 8vo. Pp. 704. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price \$5.25.

Professor Parvin does not need any introduction to physicians of the West. He was a resident so long among them, teaching obstetrics in the Medical College of Ohio, in Indianapolis, and in Louisville, and editing medical journals in Cincinnati, Indianapolis and Louisville, his name is familiar. In fact, not a few have a personal acquaintance with him.

The first edition of the work met with such success that the author has been induced to revise and enlarge it so that it may represent the "science and art" of obstetrics in its present state of advancement. That it does so, a brief examination will undoubtedly establish. Prof. Parvin is too industrious a student, and too jealous of the distinction he has attained in the profession as an eminent obstetrician, to permit a work by him to fail in reflecting the latest advances of the department of medicine to which it is devoted. While the changes that have been made in the second edition have not materially increased the bulk of the volume, yet they have been of a kind as to make it a new work.

The work, we understand, has met with a flattering reception in England. Why should it not? A gentleman of the intelligence and cultivation of Professor Parvin, who has always been a most industrious student of his specialty, would, of course, when he ventured upon a task of the kind prepare a work of the highest merit—a work that would obtain the commendation of all able to appreciate it.

We have no doubt but that the second edition of Professor Parvin's *Obstetrics* will be in even greater favor than the first edition was. There will be but few medical colleges of the country that will not have many students among whose text-books will be found Parvin's *Obstetrics*.

GEMS AND PRECIOUS STONES OF NORTH AMERICA.—A Popular Description of their Occurrence, Value, History, Archæology, and of the Collections in Which they Exist, Also a Chapter on Pearls and On Remarkable Foreign Gems Owned in the United States. Illustrated with Eight Colored Plates and Numerous Minor Engravings. By George Frederick Kunz, Gem Expert

with Messrs. Tiffany & Co., Special Agent of the United States Geological Survey and of the Eleventh United States Census, Member of the Mineralogical Society of Great Britain and Ireland, etc. 4to. New York: The Scientific Publishing Company.

Physicians take more interest in the natural sciences than do the members of other professions, for nearly all the branches of the natural sciences—mineralogy, geology, zoology, etc.—are more or less collateral to medicine. All love the beautiful; and what are more beautiful than gems and precious stones? Fine diamonds are objects that one never tires admiring.

Mr. Geo. F. Kunz, the author of the work before us, is gem expert in the celebrated house of Tiffany, of New York. When on a visit to New York, some time ago, the proprietors of the Tiffany palace kindly permitted us to wander through the stories of their great building, filled with costly jewelry, gems of every description, and with works of art of every kind, at our leisure and our pleasure. Surely, the expert among such vast profusions of pearls and precious stones must be an expert indeed.

The work contains a world of interesting facts about precious stones and their relations to mineralogy and archæology, narrated in a clear and interesting manner. The chromo-lithographic plates made for the work by Messrs. Prang & Co. are remarkably fine specimens of the art, brought to such perfection by this firm that nowhere in the world is work done of equal quality. The volume fills a want. It is invaluable to the investigator. The *Jewelers' Weekly* says that it is doubtful if it has an equal in any country.

A DICTIONARY OF PRACTICAL MEDICINE. By Various Writers, Edited by James Kingston Fowler, M.A., M.D., Fellow of the Royal College of Physicians; Senior Assistant Physician to the Middlesex Hospital, and Lecturer on Pathological Anatomy in the Medical School, etc. 8vo. Pp. 942. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price \$5.00.

"Another Medical Dictionary!" will certainly be the exclamation on reading the above title. The present time seems to be unusually prolific of dictionaries. For a very long time—twenty-five years at least—the only medical

dictionaries published in this country were Dunglison's and Thomas'. But within the present year, 1890, including the one before us, there have been published three new works. But we err. Five years or more ago the Appletons published Quain's Dictionary. Though a very valuable work, which no physician who possesses a copy would wish to part with, yet it has but little claim to be entitled a dictionary, though termed such, being more of the character of an encyclopedia.

As the preface quite correctly and concisely describes the character of the work, we will copy a few lines from it: "In this work an attempt has been made to present in a somewhat concise form an account of the more important subjects comprised under the head of Practical Medicine, including also the diseases peculiar to women. In the selection of the subjects and the order of description, practical utility has been considered rather than completeness of detail, in the belief that such a work will probably be more often referred to with some immediate object in view than used for systematic reading.

"All subjects properly belonging to surgery have been excluded, but in some of the articles dealing with the diseases of women it has been necessary to give the details of the surgical procedures recommended."

Forty-two eminent physicians of England have contributed to the work, Dr. J. K. Fowler editing it. Being confined in its scope to practical medicine, it differs from other dictionaries in that it is not limited to giving concise definitions of the words and terms which are presented in alphabetical order. Instead of the usual lexicographical method, the various subjects involved in practical medicine, as they occur in alphabetical order, are treated at considerable length, all the main facts pertaining to them being concisely stated. For instance, on turning to Amenorrhea, we find nearly two pages devoted to its consideration. Other affections have three, four, and even more pages occupied in their consideration. But as the work contains nearly one thousand pages, and is printed in brevier type, there will be found treated in it, or satisfactorily defined, all subjects pertaining to medicine. While similar to Quain's Dictionary in some respects, it contains a vastly larger number of articles and definitions.

The work will be found very convenient and valuable for reference.

OPERATIVE GYNECOLOGY. By Andrew Jackson Howe, A.M., M.D., Professor of Surgery in the Eclectic Medical Institute; Author of the Art and Science of Surgery; Treatise on Fractures and Dislocations, etc. 8vo. Pp. 336. Cincinnati: R. Clarke & Co. Leather. Price, \$4.00.

This work is an excellent compilation in the department of gynecology, and is well adapted to meet the wants of medical students and of family physicians. In preparing it the author has largely eschewed the speculations of theorists, and limited himself to established and recognized facts.

Whoever examines the work will admit that the author is skilled in condensing. Though all the operative manipulations of gynecology are described with sufficient detail to enable them to be clearly understood and performed by one in possession of the necessary collateral knowledge—from the simple operation of introducing a speculum into the vagina to the most complex and difficult involved in removing an ovarian tumor or in performing the Cesarian section—besides treating the various affections requiring operative proceedings in regard to their etiology, pathology, etc., so as to afford a satisfactory knowledge of their nature and character, yet the work contains but a few pages over three hundred. Though we may disagree with the author on many subjects, we coincide with him in the statement that works on the diseases of women which attain the size of six or eight hundred pages, could with advantage to the average reader, be condensed into half the space. Also we assent to his declaration that a "big tome is not an unquestioned sign of great merit."

The author has taken the liberty to coin a number of words. For instance, he employs the word "abdominotomy" to signify the operation of opening the abdomen instead of the word "laparotomy." Laparotomy is derived from the Greek word *laparo*, which means the flank, the groin; and, consequently, Dr. Howe considers it absurd to use it to signify the opening of the abdomen in the median line.

Though the author makes no pretensions to originality in the work, yet, as he has had a large experience in a practice of many years he constantly refers to it throughout the volume in support of the methods of treatment he recommends.

A TEXT-BOOK OF COMPARATIVE PHYSIOLOGY. For Students and Practitioners of Comparative (Veterinary) Medicine. By Wesley Mills, M.A., M.D., D. V. S., Professor of Physiology in the Faculty of Human Medicine and the Faculty of Comparative Medicine and Veterinary Science of McGill University, Montreal; Author of a Text-Book of Animal Physiology, etc. With 476 Illustrations. Cloth. 8vo. Pp. 636. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, \$3.00.

Though this work was prepared primarily for the use of students of veterinary medicine and veterinary practitioners, yet physicians who are engaged in healing the diseases of their fellow-men will find that the study of it will be of equal value to themselves. Much of the work is devoted to treating physiology in general, or what might be termed common physiology. For instance, at page 171 the study of the "Contractile Tissues" is begun, which, with the consideration of "Muscular Physiology," is continued to page 208, when the study of the "Nervous System" is entered upon. Throughout the whole of these 38 pages all that is said in description of muscular fibres—their character, office, etc.—applies to the muscular tissues of all the vertebrate animals alike. The study of the characteristics of muscular tissue is made especially interesting in this work, from the fact that various kinds of apparatus, some of which are operated by electricity, are described for recording space, time, etc., in the contraction of muscular cells.

When a work on human physiology is studied, and it is observed that a very large portion of our knowledge of vital action in the human being, such as digestion, nutrition, assimilation, secretion, excretion, respiration, etc., has been gained by minute and close study of the physiological processes in the lower animals, we will not be surprised on finding in a work upon veterinary physiology the same facts with which we had become familiar in studying the physiology of human beings. Really we believe that giving a few hours' attention to a work like this would result in the general conviction that the proper method of studying physiology would be to begin first with the study of general or comparative physiology, and, after a knowledge of it has been acquired, then to take up the study of human physiology.

Teachers of physiology will do much in the way of ad-

vancing the knowledge of their students by recommending to them the study of this work. Physicians will enlarge their information greatly—will acquire a better appreciation of vital action and the phenomena of disease—by an attentive study of the work.

There are but very few works upon veterinary physiology. Students in attendance upon veterinary colleges have been under the necessity for the most part, we understand, to study works on human physiology to obtain their physiological knowledge. For their knowledge, therefore, of the digestive processes, and of other functions as they occur in the lower animals, they would have to depend upon the lectures of their teachers. The work of Prof. Mills will consequently supply a great want, and will supply it well.

PHYSICIANS' AND STUDENTS' READY REFERENCE SERIES.

Epilepsy: Its Pathology and Treatment. Being an Essay to which was Awarded a Prize of Four Thousand Francs by the Académie Royale de Médicine de Belgique, December 31, 1889. By Hobart Amory Hare, M.D. (Univ. Penna.), B. Sc., Clinical Professor of the Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania; Physician to St. Agnes' Hospital; Laureate of the Royal Academy of Medicine in Belgium, etc. 12mo. Pp. 228. Cloth. Philadelphia and London: F. A. Davis. Price, \$1.25.

It must be granted that this work has merit, when it is considered that the Royal Academy of Medicine of Belgium pronounced it worthy of a prize of four thousand francs.

In discussing the pathology of epilepsy the author writes: "When we remember that in nearly all cases of epilepsy due to growths or injury the lesion is found after death, or even during life, to be cortical in situation, we have the finger of pathology to guide us; and we may also state that whenever the tumor is the direct cause of the disease it begins locally, provided the lesion be in the cortex, or, more generally, if it be sub-cortical.

"To one who has experimented and seen the results that the writer has seen in this work, it seems scarcely necessary for him to adduce evidence of the epileptic paroxysm which stimulation of the cerebral cortex may set up. If a moderately strong current be applied to the arm-center, or any similar point, the limb will respond, and, if the stimulation be continued, will become for the moment tonically con-

tracted, but immediately after passes into clonic movements, which become more and more violent until the rest of the body is convulsed. Not only is the condition exactly similar to the ordinary epileptic attack in every way, but loss of power not only follows temporarily in that limb, but also the center governing it refuses to respond to further stimulation for the time being."

In treating epilepsy the author does not administer bromide of potassium empirically for the reason that it has cured previous cases of the disease, for his treatment is governed largely by the cause, but he regards bromide of potassium by far the most useful drug for the relief of the affection.

The work is really a very interesting one, and we advise our readers to secure a copy and study it. They will find epilepsy treated in all its phases, and all its phenomena discussed. If after giving the volume an attentive perusal, a satisfactory specific can not be found, there will be a feeling, at least, that much interesting information has been gained; for, though a terrible disease, yet it exhibits phenomena of the highest interest.

If a specific for the affection should ever be discovered, it will only be found by one who has familiarized himself with all the facts pertaining to it. The readiest way to acquire these will be by learning them from a work like this of Dr. Hare.

A MANUAL OF MODERN SURGERY: An Exposition of the Accepted Doctrines and Approved Operative Procedures of the Present Time. For the Use of Students and Practitioners. By John B. Roberts, A.M., M.D., Professor of Surgery in the Woman's Medical College of Pennsylvania; Professor of Anatomy and Surgery in the Philadelphia Polyclinic, etc. With 501 Illustrations. 8vo. Pp. 800. Leather. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$5.50.

There are so many works upon surgery before the profession at the present time, the most of them too of a high order, there seems to be no reason for an increase of the number. Some would be disposed to consider that the publication of still others is a wrong; for the reason that every new work, without regard to merits, obtains more or less patronage which detracts from that of others previously in the field; and thus prevents their authors from securing

the financial reward to which they are entitled for their long, laborious efforts to add to surgical knowledge, by study, research, observation and experience. In fact, it sometimes occurs that some of the later authors fill up their works with the results of the researches of those who have preceded them, which had cost them many months and weeks of toil, oftentimes without even giving credit.

But it does not devolve upon us, when a new work has been published, and has been brought to our attention, to decide whether or not it "fills a want," but to set forth whatever merits it may have. The work of Prof. John B. Roberts is an entirely new work in the field, for the purpose of unfolding to all who may consult it what constitutes the science and art of surgery of the present time.

It has not been the effort of the author in the work on our table to present to the profession a book distinguished for the original matter contained in it, but to prepare a volume that will be in every respect, to the best of his ability, a thoroughly good surgical text-book. Being a teacher of surgery both in college and hospital, he understands just what sort of a text-book a student needs from which, with the aid of lectures, to acquire a knowledge of surgery; and he has, therefore, prepared his manual in accordance with this knowledge. While he has drawn upon his own large experience, he has consulted, as he states, the latest literature of all kinds bearing upon his specialty. He has taken up no space in speculations, or in discussing theories that, after many pages had been spent upon them, would have been no nearer a solution than when first broached.

Though there are many works upon surgery of great excellence that have been before the profession for some time, as Ashhurst's, Erichsen's, Bryant's, etc., yet there are none of a more practical character than that of Dr. Roberts. It is filled with illustrations that will aid much in elucidating the text.

Editorial.

THE CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION.—There are some individuals so destitute of all innate principles of honor that they can not understand how that a person can perform an honorable act through

any feelings of integrity that he may possess. In fact, never being moved themselves by any emotive function of the kind, they scoff at the suggestion that this or that one has been impelled by moral principles, when a reason is sought why, under certain circumstances, he has discharged his duty. Always moved themselves by selfish motives, they seem to be unable to comprehend that there can be in others any other impelling power to action than selfishness. They are constantly, therefore, charging those around them with hypocrisy, fraud, etc.

Very little can be done in making better persons of those who have but few or no inborn principles of right. But one whose mind, in its emotive department, possesses moral tenets, can be trained and elevated and made fit for association with the highest type of his race. Even though such a person, by evil surroundings and by having been led captive by temptations to which he had been exposed, had become sunken deep in vice, yet, when brought under moral influences there will be hope for his reformation and elevation. But not so with the man destitute of a moral nature. Though he may have wealth and occupy the highest plane in society, and come in contact every hour of the day with the good and upright, moral turpitude will control all his actions. If poor and pinched by poverty, he will probably be a criminal, and no moral training while in prison or out will make a good man of him.

A few weeks ago the Prison Reform Association met in Cincinnati, holding its meetings at the Scottish Rite Cathedral, and presided over by ex-President Hayes. At one of the meetings, which we were so fortunate as to be able to attend, a delegate from Mississippi, a plain appearing gentleman who had intelligence sufficient to observe, deduce conclusions, and be benefited by experience, made some remarks in regard to the criminal class of his State. He said—much laughter resulting from the statement—that they would not be able to do much in the way of reforming criminals in the prisons in Mississippi until they should have *better men for criminals*. In explanation he stated that the large majority of the criminals in Mississippi were negroes; that colored people felt no disgrace on account of imprisonment; that a colored man thought it a distinction, to be proud of, rather than otherwise, that he had been in the penitentiary. With such a criminal class he thought, and undoubtedly he

thought correctly, but little could be done in the way of reformation.

But we are losing sight of the subject about which we had in our mind to make a few brief remarks. The Code of Ethics, as it is termed, was adopted by the American Medical Association soon after its organization thirty-five or forty years ago. Much opposition was made to it when first adopted from some quarters; but the better class of members of the profession indorsed it. Many of the leading medical journals of Great Britain commended it in the highest terms, stating that they thought that physicians of England should feel humiliated that their brethren of the New World should first formulate a written code to which reference could be made, for the purpose of solving ethical questions in regard to which there could be doubts among honorable professional men.

Many were of the opinion, and many still hold the view, that the purpose of formulating and adopting the Code of Ethics was to elevate the morals of the profession. If that was the notion of the framers, they were certainly very ignorant of human nature. Men are held in restraint by laws, but not made better by them. A physician not disposed to act honorably toward his brethren, when brought in contact with them in pursuing his profession, would not be forced to do so by a code in which the duties which physicians owe to each other are set forth, even though he has subscribed to it by connecting himself with a medical society which had adopted it. The greatest influence which a code of ethics would exert upon him would be to make him careful in his unprofessional conduct, so that, if put upon trial before his peers, he could not be convicted, for want of evidence. But we are not able to call to mind, at the moment, of a case within our observation of a physician being tried for violating the Code of Ethics.

The Code of Ethics which was formulated by the American Medical Association, and which it requires all medical societies throughout the United States to adopt in order to be represented in it by delegates at its annual meetings, is of great value in defining the obligations of physicians to one another and the duties which they owe to their patients and to the public. The principles involved in ethics in general, in a rude state of society, are simple and easily comprehended; but as civilization, enlightenment, and cul-

ture advanced, and intercourse became widened and extended, it has become a science; and though that which pertains to the practice of medicine is comparatively limited yet, in that department, it is easy to imagine that not a few puzzling questions would arise about which there could be honest disagreements. In determining many of these the Code has been of great service. The formulators of it were undoubtedly wise men, and men inspired by the highest moral principles. They had had great experience and knew what relations physicians were apt to sustain toward one another under many and varied circumstances. The more we study the Code of Ethics the profounder is our respect for it. As a human production, we believe it to be as near perfection as it can be made.

It is greatly to be lamented that men belonging to so noble a profession as is that of medicine will permit any other than the highest motives to govern them in their conduct. Men who are so often in the presence of death as are medical men, and witness the wailings of those who are about to be separated forever from those they hold most dear, and hear the mournings of the dying over the wrong-doings of their lives, and wishing they could live a little longer that they might be able in very small part to make amends, declaring that when a person comes to die, as they are about to do, that no other feelings than those of having done honorably and uprightly toward one's neighbor will afford any comfort under such circumstances.

Is it not remarkable that men who, on account of the high profession they pursue, and who see so much of the sorrowful results of wrong-doing in all of the phases of life—in the victims of vice, in the infidelity of married men and women, in the treachery of friends to one another, in the neglecting of duties and obligations to fellow men—should themselves trample under foot all obligations of duty, will condescend to low acts to obtain business, will be guilty of treachery to friends. Some poet speaks in this manner of a person who will take from an individual his means of making a living, that he may secure for himself a little gain that he probably does not need:

“The man who rises on his neighbor's ruin,
Lives in a crowd of foes, himself the chief:
In vain his power, in vain his pomp and pleasure,
His guilty thoughts, those tyrants of the soul,
Steal in unseen, and stab him in his triumph.”

A poetess must have had in her mind an unprincipled doctor when she wrote the following lines:

“At last I know thee—and my soul,
From all thy arts set free,
Abjures the cold consummate art
Shrin'd as a soul in thee,
Priest of falsehood—deeply learn'd
In all heart treachery.”

But we can not spare further space on the subject of ethics in our present issue. We intend, however, to continue the subject. We must say something about those who cunningly endeavor to injure a fellow physician by innuendo, false statements, etc.

BROMIDE OF POTASSIUM IN THE TREATMENT OF EPILEPSY.—Dr. Hare, in his work on Epilepsy, says that bromide of potassium is more efficient in its treatment than any other medicine. While it fails to cure some cases, yet in the vast majority of cases, if properly pushed, the seizures are so decreased both in violence and frequency, that its use may be said to be indicated in every case of the disease. It may be laid down as a rule that the bromide treatment of epilepsy is, *par excellence*, the treatment to be employed on every occasion. “There is no other drug known,” he says, “which can be relied upon so absolutely, or which is so powerful in its action and devoid of marked toxic effect, unless given in enormous doses.”

The doses to be used vary with the salt employed to a considerable extent, and depend upon the character of the disease and temperament and physique of the patient.

As is generally admitted, Dr. Hare asserts that the greater the duration of epilepsy, the greater the difficulty is in effecting a cure. The frequency and severity of the attacks are really more important than the actual duration of the ailment. For, if a man has only one fit every six months for twenty years, his condition is far less serious than if he has a history of three or four fits a day for one year. Again, the violence of the attack may be the most important fact to be considered; for if they are violent enough to endanger life, remedies must be pushed even beyond the point of tolerance.

Another point to be considered is the condition of the digestion, which the bromide of potassium is peculiarly liable to disorder, and which is sometimes so troublesome as to necessitate the administration of the drug by the rectum

in serious cases. Females generally require smaller doses than males. The dose to begin with in moderate cases is about ten grains three times a day; and while this may seem to be a small quantity, says Dr. Hare, it can be, he says, rapidly increased in amount without causing the gastric distress produced by the sudden use of larger doses. Every day may have an additional ten grains added, until at the end of a week the patient is taking eighty grains each day. Very shortly the patient will become saturated by these doses. There are only a very few cases in which a more rapid condition of bromism is needed. If, however, continues Dr. H., the patient has become able to stand large amounts by the prolonged use of the drug, the amount given is not to be governed by grains, but by physiological effects, and it may be pushed almost to any amount which is borne.

Dr. Hare thinks that the bromide should be administered after meals, not before, if we wish it to affect the general system. Only when a local gastric effect is desired should we administer medicines on an empty stomach. If taken after meals the appetite is not diminished, but few, however, can take ten or twenty grains of bromide potassium before breakfast without suffering from anorexia.

It has been held by some that the bromide of potassium should be taken in minute doses, frequently repeated, in order to keep the patient constantly under its influence. Dr. Hare is of the opinion that this is an example of therapeutic ignorance. The plan is inconvenient, annoying, and apt to disorder the stomach. He says that if the attacks have a distinct periodicity, or can be foretold for as much as two hours beforehand, the remedy may be taken in a large dose at this time, and only a few grains given in the intervals. If these attacks are severe, no one should hesitate to use large doses by the mouth and by the rectum on the day of the attack.

A physician should be careful not to be premature in pronouncing a patient cured. Bromide of potassium should be employed in moderate doses for at least three years after all fits have ceased, and the closest watch should be observed after that time, for the slightest sign of their return. The quantity taken each day should be gradually decreased, and not suddenly stopped short.

Dr. Hare states that it has been undoubtedly proven that epilepsy is cortical in its origin. The bromides act power-

fully upon the cerebrum in the higher animals, decreasing the irritability of the motor centers in these regions to a very great extent.

Bromide of potassium seems to be eliminated from the system very slowly. It is stated that Rabuteau has seen its presence in the urine one month after the last dose, and Bill has found it two weeks after the use of the drug had ceased. Bromism, or chronic poisoning by any one of the bromides, is often a very troublesome symptom, which has to be dealt with carefully, for if the drug is withdrawn the attacks return. The first signs of this are generally shown by acne in the face, which may soon spread over the whole surface of the body—the face and neck becoming a mass of sores covered with pus.

LATIN.—We have received an essay of eight pages devoted to the consideration of a knowledge of Latin as a compulsory qualification for the study of medicine. The essay is by Dr. Andrew J. Howe, of Cincinnati.

Dr. Howe belongs to the class of physicians known as *Eclectics*; yet, as persons are in the habit of gathering gold wherever they can find it, we do not propose to reject a good thing that comes in our way, because it did not happen to be placed in our way by some other party than the one who did.

Dr. Howe first considers the requirements in force in various countries for the study of medicine. In England he states that the "*compulsory subjects*" are—English grammar and composition, Latin, to the extent of grammar and the reading of easy lessons, arithmetic, and the simple equations of algebra, geometry with easy problems.

In France, there is required an advanced knowledge of Latin, and a thorough understanding of physics, chemistry, mathematics and zoölogy. In Germany the Latin language must be well understood, as regards facility to translate and to compose long sentences, and to read easy lessons in Greek. In Italy a young man desiring to study medicine must have a knowledge of mathematics and physics, and pass a rigid examination in Latin and Greek. In Switzerland, Spain and Portugal, besides having a knowledge of mathematics, physics, etc., an extended knowledge of the Latin and Greek languages is required.

Says Dr. Howe: "In considering the subject, it must be remembered that the language of science is largely classical.

Latin and Greek are utilized in almost every technical expression. *Hysterectomy*, for instance, is a compound of Greek and Latin, with an English terminal. Medical literature is burdened with technicals of classic origin. The nomenclature of every branch of science is classical." The fact of so much Latin existing in medical science makes it necessary for a medical student, who has no knowledge of Latin, to be constantly using a dictionary, consuming an immense amount of time.

Dr. H. illustrates the convenience of understanding Latin by referring to the International Medical Congress, which met a few weeks ago in Berlin. There were representatives from twenty-five different nations. In reading papers, and especially in the discussion of topics, there must have been, he says, a Babel of tongues. Few could understand what was said. An American who could speak and understand English only, could not, between the meetings, converse with distinguished delegates from France, Germany, Italy and Spain. For social intercourse he must seek for fellow Americans or Englishmen. In contrast with this confusion of speech is a council of Catholic dignitaries convened at Rome to discuss measures of the Church. Though they have come from the four quarters of the globe, and at home officiate in the vernacular of the country, all understanding, they transact business in a common language.

While the European nations require by law a knowledge of Latin on the part of those proposing to study medicine, Dr. Howe calls attention to the fact that only in America has it been permitted for those who propose to enter the portals of medicine, to come directly from farms, trades and work-shops, without a question being asked as regards educational accomplishments. We can add to these statements of Dr. H. that we have known young men to matriculate who had but a few weeks before laid down the blacksmith's sledge, the needle of the tailor, the awl and bristle of the shoemaker, and could not write a sentence without spelling two-thirds of the words incorrectly.

Permitting but poorly educated men to enter the medical profession took its start in this country many years ago, in consequence of the rapid increase in population. The vast European emigration, for some time, doubled the population every few years. Under the circumstances there was a great want of physicians. So few were they in proportion to the whole population that the medical colleges were

under the necessity of licensing students to practice after attending one course of lectures. In this way it was brought about that there used to be many very eminent physicians who had never graduated. But we are rambling from Dr. Howe's paper.

Says Dr. Howe, in speaking of a four years' course, which is being adopted by some of the medical colleges: "If the medical course cover four years, I would reduce it to three, and require a preliminary year to be devoted to classics and natural sciences. It would amount to the same in the end, so far as cost and time is concerned, yet would be a wiser division of study. A man with a year's training in Latin will learn much faster than the student who has to turn to the medical lexicon at every step.

Dr. Howe states a fact which our readers will recognize that we have uttered not a few times when discussing medical education in the MEDICAL NEWS; namely, that if two young men of equal natural abilities begin the study of medicine at the same time, having the same preceptor, and using the text-books of the same authors, one having none of the mental discipline and culture which proceed from a classical education, the other having had the full benefit of a university education, the result will be that the latter will outstrip the former in the professional race, especially in large towns and cities where culture is appreciated. The unlettered, uncultivated doctor will be recognized as such, and intellectual vigor will not conceal the fact that the possessor of it is ignorant. It will be perceived by those competent to do so, that the medical man, with mental training, is the better physician, for his cultivated mind enables him to appreciate more readily and more thoroughly scientific truths. When there is an exception, it will be found that it has resulted from the fact that the educated man has relied on his merits, in his efforts to obtain patronage, pursuing an upright, dignified course in coming in contact with the people of the world. His competitor, however, considering that making money should be the grand aim of life, that integrity and uprightness are of secondary importance, and recognizing also the fact that a large portion of those about him worship wealth, caring seemingly but little as regards the moral qualifications of those possessing it, has not hesitated to pursue any dis-honorable course to obtain business, employing hypocrisy, slander by innuendo, untruthfulness.

CRIME.—The *Prison Reform Association*, presided over by ex-President Hayes, met in Cincinnati quite recently. We had but very little time to attend the meetings, but we read some of the discussions as reported in the newspapers. There was evidently not a physiologist or a psycho-physiologist among the number. In all the discussions that we heard and read, vice and crime was regarded from the stand-point of free will on the part of the victims, the remedy being to appeal to the reasoning faculties and the moral senses. Probably not a member who took part in the proceedings and regarded himself an expert in all that relates to criminals, had ever read Maudsley, Carpenter, Buckle, Quetelet, Rawson, etc.

We wrote and published a paper a few years ago on "Vice and Crime." Some time ago we contributed an article to the *Lancet*, of London, on the subject, which appeared in two successive issues of that journal. It is too long for us to treat in an editorial, but we will copy a paragraph from each of the works of Quetelet, Rawson and Buckle as regards the prevalence of crime.

Quetelet says: "In everything which concerns crime the same numbers recur with a constancy which can not be mistaken. This is the case with even those crimes which seem quite independent of human foresight—such, for instance, as murders, which are generally committed after quarrels, arising from circumstances apparently casual. Nevertheless, we know from experience that every year there takes place not only the same proportionate number of murders, but that even the very instruments with which they are committed are employed in the same proportion."

Buckle says: "Suicide is merely a production of the general condition of society, and the individual's volition only carries into effect what are the necessary consequences of preceding circumstances. In a given state of society a certain number of persons must put an end to their own lives. This is the general law, and the special question as to who shall commit the crime depends, of course, upon special laws, which, however, in their total action must obey the larger social law to which they are all subordinate. The power of the larger law is so irresistible that neither the love of life, nor the fear of another world can avail anything toward even checking their operations."

Rawson says: "No greater proof can be given of the

possibility of arriving at certain constants with regard to crime than the fact that the greatest variation in the proportion of any class of criminals at the same period during a period of three years, has not exceeded a half of one per cent."

It would appear, therefore, as stated by a writer, and which we have drawn attention to, that many of the actions of mankind which we are disposed to attribute to free will and independent action upon the part of the individual, are really the result of fixed and immutable laws controlling the moral world, which is almost as definite and arbitrary as the laws controlling the physical world.

UNIVERSITY OF PENNSYLVANIA.—We have received the Catalogue and Announcements of this institution for 1889 and 1890, containing two hundred and sixty-two pages. The volume embraces not only the announcement of the Medical Department, but also that of the Dental, Legal, Literary and Scientific, etc.

The volume contains a brief historical sketch of the Medical School from which we have gathered a few facts, which we feel sure will be interesting to physicians generally.

The Medical Department of the University of Pennsylvania is the oldest medical school in this country. It was founded in 1765 by DR. JOHN MORGAN, who filled in it the first medical professorship created in America. Dr. Morgan was a pupil, it is said, of HUNTER, in London, and of CULLEN, of Edinburgh. We presume he heard Hunter deliver some lectures in London, and attended some lectures in Edinburgh; and, from this fact, he was regarded as a pupil of both of these most celebrated men. Dr. Morgan was soon after joined by another pupil of Cullen, DR. WM. SHIPPEN, as Professor of Anatomy and Surgery. In the year DR. ADAM KUHN was added as Professor of Botany and Materia Medica, and in June, 1768, a "Commencement was held" at which medical honors were first bestowed, the first in America. In 1769, DR. BENJAMIN RUSH was elected Professor of Chemistry, and DR. THOS. BOND of Clinical Medicine.

At various times professors whose reputations have been national have been members of the faculty. Among them are BURTON, WISTAR, CHAPMAN, PHYSICK, DEWEES, HOR-

NER, HARE, GIBSON, JACKSON, GEORGE B. WOOD, HODGE, JAMES B. RODGERS, CARSON, the elder PEPPER, FRANCIS GURNEY SMITH, and NEILL.

The number graduated from the Medical Department of the University has been 10,121.

A course of four years' study has been adopted; and this four years' course all students are earnestly recommended to take. But there has been arranged a three years' course, at the end of which the degree of M.D. will be conferred upon those who have taken it, providing they sustain a satisfactory examination.

The FIRST YEAR is occupied with work in the various laboratories of Chemistry, Pharmacy, Osteology, Histology, and in Dissection.

The SECOND YEAR.—In addition to didactic and clinical teaching, practical instruction is given in Medical Chemistry, Pathological Histology, and Physical Diagnosis. Dissection is continued.

THIRD YEAR.—Morbid Anatomy—including Autopsies, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Gynecology, Dermatology, Ophthalmology, Otology, etc.

FOURTH YEAR.—Clinical Medicine, Physical Diagnosis, Clinical Surgery, Nervous Diseases, Electro-Therapeutics, Mental Diseases, Gynecology, Pediatrics, Clinical and Operative Obstetrics, Genito-Urinary Diseases, Medical Jurisprudence and Toxicology.

MISSISSIPPI VALLEY DOCTORS.—Louisville, October 11.—The Mississippi Valley Medical Association held its concluding session yesterday and adjourned. Officers were elected as follows: President, Dr. C. H. Hughes, of St. Louis; First Vice President, Dr. John N. Hollister, of Illinois; Second Vice President, S. S. Thorn, of Ohio; Secretary, E. S. McKee, of Ohio; Chairman of the Committee on Arrangements, Dr. I. N. Love, of St. Louis. Judicial Council—Dr. Murdock, Dr. H. H. Mudd, of St. Louis; Dr. N. D. Griffiths, of Springfield, Ill.; Dr. A. R. Owens, of Indiana; Dr. Xenophon Scott, of Ohio; Dr. Walker, of Detroit, and Dr. Reynolds, of Louisville. The next meeting will be held at St. Louis the third Wednesday in October. An elegant banquet was enjoyed by the Association. The papers of the published programme were presented and discussed.

GEMS AND PRECIOUS STONES.—Among the Book Notices will be found the notice of a work just issued devoted to an account of the gems and precious stones that have been found in North America. From it we learn that the admiration of diamonds and gems of every kind has greatly increased in the United States within a very few years. Ten years ago, it is stated, that one hundred thousand dollars was an unusual amount for even the wealthiest in this country to have invested in diamonds; to-day there are a number of families each owning diamonds to the value of half a million of dollars. Earrings worth from five thousand to eight thousand dollars have become so common as not to excite wonder. There is one necklace in this country worth three hundred and twenty thousand dollars, and a number valued at over one hundred thousand dollars each. Of the French crown jewels sold in Paris, May, 1886, more than one-third, aggregating over five hundred thousand dollars in value, came to the United States.

In 1868 one million dollars worth of diamonds were imported in the United States. In 1888 *eleven millions*; in 1889 the same amount. It will thus be seen that in 1889 the increase in value of the importations was eleven times greater than those of twenty years ago. These figures represent the import prices, excluding importers' profits, cost of mounting, and cost of cutting in case of many of the diamonds.

We mention these facts for the reason that they are interesting to all intelligent persons; but having only recently been published in a way that limits their circulation, they are available to only a few.

PEACOCK'S BROMIDES.—Dr. F. F. Henwood, of Thompson, Pa., writes as follows:

"In a case of acute neuralgic headache I used Peacock's Bromides with complete success, and find it to be the best nerve sedative prepared."

FOR SALE.—Dr. V. H. Parker, of Hawthorne, White Co., Ill., writes us that he has a fine country practice worth \$2,000 per annum which he will pass over to any one who will buy his property, consisting of house, office, barn, etc. Price, \$1,000. No competition. For particulars address him.

THE CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 275. } NOVEMBER, 1890. { VOL. XIX. No. 11.
Old Series. } New Series.

Original Contributions.

Some Remarks on Sick Headache, with Special Reference to Treatment.

BY PHILIP ZENNER, A.M., M.D.,

CLINICAL LECTURER ON DISEASES OF THE NERVOUS SYSTEM
IN THE MEDICAL COLLEGE OF OHIO.

A paper read before Ohio S. W. Medical Association in Cincinnati, October 16, 1890.

THE term sick headache, applied to periodical headaches, with nausea or vomiting as prominent attending symptoms, is, clinically, very significant and appropriate. But not uncommonly, with the laity almost universally, the term has a further pathological, that is, etiological significance, whose appropriateness is far more questionable, if it must not be altogether denied. Because the stomach symptoms are so prominent it is supposed that the stomach disorder is the primary condition, that the headache was provoked by some indiscretion of diet or the like. The cause is believed in none the less if, as is often true, the stomach seems quite normal in the free intervals, and quite unaffected by ordinary indiscretion in diet.

To the careful scrutiny of the medical mind the gastric symptoms have far less etiological significance. They mean to him usually the past manifestations of a nerve storm. Nausea and vomiting are very frequently nervous symptoms; they are especially common in organic cerebral disease. Furthermore, in many cases of sick headache, though the patient accuses some indiscretion of bringing on the paroxysm, he is unable to find the indiscreet act, and spite of all the care he can display, the attacks of headache continue to recur. Such facts and the knowledge that the disease occurs chiefly in those hereditarily predisposed to it,

have led many physicians to the opposite conclusion, that the headaches have no relation to gastric disorder. Though this view, which is coming to be pretty generally accepted, is probably true of most cases, it ought not be accepted for all of them. There must be a condition of the central nervous system which favors the outbreak of the paroxysms, or, perhaps, it were more accurate to state that condition is the disease itself. But, nevertheless, various and diverse pathological conditions may act as exciting causes of attacks, provoking them by reflexly affecting the nerve centers. And, doubtless, not infrequently this secondary cause may be found in the digestive tract. We can not always decide easily in just what cases the exciting cause is to be sought in this part; but when attacks only occur after some evident indiscretion, or if the same act of indiscretion is always followed by an attack, such relationship is evident.

A second way in which attacks of migraine may be connected with conditions in the alimentary tract has been recently suggested; that is, the absorption of ptomaines from the tract into the blood. Some patients seem to be able, frequently, to avert a fully developed paroxysm by taking a cathartic at an early period, the explanation of which is, possibly, the arrest of the absorption of ptomaines.

But in most instances we must look further than the alimentary tract in seeking etiological factors. On many sides the disease has been supposed to be related to gout and rheumatism. It is more probable that an allied condition, lithæmia, frequently underlies the migraine habit, and its treatment—which is mostly of a character to build up the general system, fresh air, exercise, nutritious, digestible animal rather than starchy, food—will tend to lessen the frequency and severity of the attacks.

The question of eye strain is a very important one, and not always to be satisfactorily answered. The ocular defects that here come into play are either anomalies of refraction, of which astigmatism is of most consequence, or lack of balance of the extrinsic muscles of the eye.

Some forms of headache, frontal and occipito-cervical, more or less constant, or brought on and specially severe when the eyes are in use, are easily brought into relation with the eye trouble, and, on the correction of the latter and perhaps, some additional treatment, are soon remedied. But it is quite different with migraine, a headache altogether periodical in type. Seguin believes that this disease is

mostly due to eye strain, but my own experience is not in accordance with his views. In many of my cases of migraine no ocular defect was found, though they were carefully examined by competent ophthalmologists, and in some the correction of the ocular defect had little or no influence on the headache. Very often in cases of migraine, in addition to the periodical attacks the patients are afflicted at times with a more or less continuous headache, though of less severity than the migraine attacks. Sometimes these additional headaches are due to eye trouble, and disappear with their correction. As before stated, in my own experience the migraine attacks are less perceptibly affected by treatment of ocular defects, yet the latter may, to some extent, favorably modify the disease, and is therefore always to be considered. But it is often a perplexing question to decide whether such treatment is necessary. Where there is asthenopia, or where the use of the eyes evidently produces or increases headache, the indication for treatment is clear. But it is when such manifest subjective conditions are absent that we may be in doubt. In truth, emmetropic eyes are the exception, some anomaly of refraction very common, but in most cases the latter causes no trouble. On the other hand, that the ocular trouble may be creating mischief, even when there is no subjective manifestations, has been shown by the influence of their removal on other nervous conditions. So it must be left to the judgment of the physician in the individual case whether, in the absence of the subjective indications, it seems necessary to attempt to correct any ocular defect which may, in careful search, be detected.

In women, attacks of migraine are likely to occur especially at the menstrual periods; they are also very likely to have made their first appearance when the menses were established, and to disappear in the climacteric period. For this reason they are likely to be attributed to some disturbance in the pelvic organs, a false inference generally. Nevertheless, local disease in these parts, especially such as produce considerable subjective manifestations, may, as is sometimes true of other peripheral source of reflex irritation, have their influence in producing or increasing nervous disease, and the latter be markedly benefited by their cure. But such treatment should always be instituted with care, for harm is often done by needless gynecological interference.

I have, herewith, mentioned the chief local pathological processes which are likely to have etiological significance in this disease. But other bodily disorders may have a causative influence, reflexly or otherwise, in the individual case, and if such be found the importance of their treatment need not be mentioned.

Nevertheless, it is true that in many, if not most, cases such etiological factors can not be found, and even when present, mental and moral influences seem to play important parts in producing the attacks. Excitement or worry are more likely than anything else to bring on a paroxysm, and times of wearing anxiety are sure to see a marked increase of the disease. And this brings us to the fact, which can not be dwelt upon too impressively, that the neurotic element in the patient is always the most important part of the disease, and that in all cases it needs proper attention and treatment. The treatment is that which tends to tone up the nervous system—fresh air, exercise, nutritious food, abundant sleep, and that mental and moral training which best enables one to bear trials and emotional strains. Treatment of this kind always accomplishes most when begun in youth, when the disease is still in its incipiency, and is of still more avail when undertaken as a prophylactic measure in predisposed subjects, when the disease is not yet manifest. As special agents, often of great value in this connection, may be mentioned electricity, hydrotherapy in their various forms. Change of scene or climate are often advantageous, doubtless in the way of improving systemic conditions. I have known attacks of migraine to practically disappear during prolonged residence in the mountains, while they had formerly been frequent and severe.

In addition to the correction or removal, so far as possible, of etiological conditions, and the general treatment for the purpose of lessening the neurotic taint, a treatment largely adopted in recent years, is the administration of *cannabis indica*. Seguin, who has recently written upon this subject (*N. Y. Medical Journal*, April 26, 1890), believes that this drug acts in the way of relieving eye strain. As already stated, S. attributes a higher importance to eye strain in exciting migraine attacks than accords with my own experience. His suggestion, of great practical value, should not be forgotten—to attempt to obtain a good extract, and always to use the same preparation in the same patient;

for extracts of cannabis indica vary much in strength. The dose should be gradually increased until slight physiological effects are observed, and, to obtain its full benefit, should be continued many months.

The occasional advantage of other drugs, the continued use of arsenic or strychnia, occasional courses of laxative medication, etc., has been sufficiently indicated in the foregoing.

I have already adverted to the fact that subjects of migraine sometimes suffer with constant headache for weeks or longer. In such cases something more than the ordinary causes of attacks is present, and should be sought for, and, if possible, remedied. The causes may be some of those previously mentioned. A condition to be thought of in this connection is a disturbance of some of the depurative processes, especially of the action of the kidneys.

Herewith I will close with a few remarks on the treatment of sick headaches. I have purposely omitted the mention of a host of remedies applied for the relief of the attacks. I have done this because these remedies are well known to you all, usually known to your patients, and because I wish to direct your attention, on this occasion, only to the curative treatment, if I may so speak, in contradistinction to the palliative treatment of migraine. The thought I wish to make prominent, the important practical lesson I would like to impress, is that each case of headache is deserving of, and should obtain, careful study. It is but too common to look upon cases of this kind as if they were all alike, and should be treated alike; and the belief is only too prevalent, both with the patients and their physicians, that little or nothing can be done for these sufferers. In truth, many of these cases are capable of great improvement, while in most of them some amelioration is possible. The natural course of the disease is in itself an augury for good. In most cases the disease begins to subside in the frequency and severity of the attacks, if not to disappear altogether when the patient is between forty and fifty years of age, and, often, at a much earlier period. There are times when the disease appears to have a more serious significance when it develops at a later period of life, and is followed by locomotor ataxia or general paralysis. It has been supposed in such instance to have the significance of a produced symptom, though the precedence of the graver by the lighter disease may have been a mere coincidence.

Obstetrics and Gynecology.

BY E. S. M'KEE, M.D., CINCINNATI.

THE suppression of menstruation as a therapeutic agency has secured strong advocacy from Gehrung, St. Louis, *American Journal Obstetrics*, October, 1889, and also by Jackson, Chicago, in the MEDICAL NEWS, April 6, 1889. The former gentleman has found special benefit in anemia and chlorosis, and the latter in bleeding myomata. The object is attained by a thorough and careful tamponade of the vagina by means of small pledgets of damp cotton. If the packing shows blood stains in twenty-four hours, it is removed and fresh cotton inserted; if not, it is allowed to remain forty-eight hours. One packing may be sufficient, but in some instances it may be necessary to repeat five or six times. There is no danger of permanently affecting the menstrual function, and neither gentleman has observed unpleasant results from this treatment. The subject is written up by Dr. Munde in the Annual, II., F, 50, 1890.

Crede's method of expressing the placenta seems to be receiving death blows from all points. It is reported that the venerable author himself has abandoned it. Ferguson, Edinburgh *Med. Journal*, assigns this method as a cause of post-mortem shock. He reports three cases where symptoms of syncope followed the expression of the placenta; also shock and unconsciousness. There was feeble, rapid and irregular pulse, sometimes quite imperceptible at the wrist. The pupils were dilated, and shallow, irregular breathing; cold, clammy sweat, and all the indications of shock. Ferguson's theory is that one or both of the enlarged and tender ovaries were squeezed between the compressing hand and the hard, contracting uterus. As the uterus often lies obliquely in the pelvis immediately following labors, this brings the ovaries within easy grasp. Menton, in the Universal Annual of Med. Sciences, II., K, II., 1890, writes in an interesting manner on this subject.

Extra-uterine pregnancy was brought before the Obstetric Section of the International Congress at Berlin by Leopold, of Dresden. The subject was handled in the author's usual thorough manner. A number of specimens representing various forms of ectopic gestation were presented. One case was ovarian, another tubal, both carried to the ninth month without rupture. The doctor also showed a litho-

paedion resulting from ovarian pregnancy, and carried for twenty-five years before removal. Several others were cases in which rupture had taken place.

The Silver Lines of Pregnancy was the subject of a very interesting paper read by Dr. F. W. Langdon, of Cincinnati, at a recent meeting of the Cincinnati Medical Society. These blemishes, which are generally considered as the necessary concomitants of pregnancy, the doctor claims, are not cicatricial in their character, but are due to a rearrangement of tissues by stretching, and become permanent because the elasticity has been destroyed by alterations, consisting of atrophic bands, which involve all the layers of the skin. The doctor believes that these *striæ* are not due alone to the distension of the skin from uterine enlargement, but that the modern dress and habits are responsible for them to a large extent. We do not see them in males suffering from tumors, which cause an equal amount of abdominal enlargement, and uncivilized women are almost entirely exempt from them. Tight corsets and constricted waist-bands, the author says, produce a lowered circulatory and functional activity of the abdominal walls; a very rational conclusion. The doctor recommends treatment to be commenced early in pregnancy, but it may be effective when undertaken as late as the fifth month. The object of the treatment is to keep up the nutrition of the skin over the abdomen, thighs and upper gluteal region. He believes that a perfectly normal skin will be of sufficient elasticity to endure any amount of stretching without impairing its structure. Every observer has doubtless seen numerous cases in which the wonderful elastic powers of the skin have been displayed. Dr. Langdon's treatment consists in daily free inunctions of olive oil to the abdomen, thighs and gluteal region, with gentle friction of the bare hand for ten minutes after each inunction. Corsets, constriction and suspension of clothes about the waist are to be avoided. The oil is doubtless beneficial, but it is probably the friction or massage which does the work. The treatment is reasonable, and the theory so in accordance with common sense that it is well worthy a trial. The ladies will be ever thankful to the doctor who thus teaches his colleagues to preserve not only the appearance, but the shape and contour of their abdomens.

Rupture of the vagina was recently brought to my attention by a case to which I was called, where the patient had been attended by a midwife. A case is now under my

observation in which the condition was probably that of a vagina duplex with the partition torn out at child-birth. At least, this is the supposition from the remains found in the vagina. Himmelfart, of Odessa, writes at length on the etiology of rupture of the vagina, in the *Centralblatt für Gynakologie*, No. 22, 1890. He finds the great majority of cases occur during labor, while some are occasioned by the introduction of foreign bodies. In very old women rupture of the vagina during connection has been well recognized. The Museum of St. George's Hospital shows a good specimen illustrating this accident in the aged. Zeiss and Frank have recorded similar cases occurring in young subjects. Frank, of Prague, recently reported two cases. The subject is one of considerable medico-legal interest.

Woman as an etiological factor of sterility seems to be fast fading from view. A few years ago we were astounded by the statement that sixteen per cent. of cases of unfruitfulness were due to the males. Few, however, had the courage to deny it, and it was not long until this per cent. was raised to twenty and thirty. Küher thought thirty-three per cent. due to the male, and Traub, of Leyden, *La Semaine Medicale*, Aug. 3, 1889, has come to the conclusion from study of his own statistics that in thirty-six per cent. of unproductive marriages the husband is at fault. De Sinety estimates that the male is to blame in fifty per cent. of the cases. Furbringer, *Deutsch Med. Wochenschrift*, No. 28, 1888, as well as many other writers, maintain that sterility in the male is much more frequent than generally supposed. A very instructive resume of this interesting subject, written by that erudite author, Parvin, may be found in the Annual of the Universal Med. Sciences, II., 1890.

Lecons de Gynecologie Operatoire (Lessons in Operative Gynecology) is the title of a very interesting five-hundred page book containing twenty illustrations, edited by Vulliet, of Geneva, and Lutand, of Paris, published by Maloine, 91 Boulevard Saint Germaine, 1890. The work is exceedingly complete of its kind, and shows a depth of research. We first find complete instructions as to pelvic examinations; one entire lecture on the sound. Vulliet's method of dilatation is clearly described and illustrated: One chapter to artificial prolapse of the uterus; one to curetting; two lessons are devoted to the palliative and surgical treatment of fibroid polypi; one a valuable resume of the principles

and practices of pelvic massage. Two treat of cancer of the uterus with vaginal hysterectomy; one of the Alexander-Adams operation and hysterotrophy; the longest, fifty pages, deals with co^po-perineorraphy. The subject of sterility is treated in an exhaustive manner; five chapters, one hundred pages, are devoted to its discussion. The volume concludes with a chapter on artificial impregnation, which is handled in a masterly manner and without gloves. Many of the descriptions of the various operations are fresh and graphic, and the illustrations are excellent.

The operation of hysterotomy for cancer of the uterus was thus described by Dr. T. A. Reamy, of Cincinnati, at a recent clinical lecture:

The patient I bring before you to-day is the one on whom I operated before you one week ago to-day, and removed the entire uterus, with both ovaries and tubes, for carcinoma. The patient is forty years of age, and has given birth to three children. In making this operation last week I did not get to explain it as I went along, so will tell you to-day how it was done. I did not cut right and left as many do, but cut in front of the uterus till I got to the utero-vesicle fold of the peritoneum, not going far enough on either side to risk damaging the ureters. I then commenced in Douglass' pouch and cut till I got to the peritoneum which makes the anterior wall of Douglass' pouch. I then went up, hugging the uterus closely till I got to the point where the peritoneum is made fast to the uterus, and, before entering the peritoneum in front or in rear, slipped small forceps up and clamped the uterine arteries right and left. Then, after drawing the uterus down, I carried my cutting through into the cavity of the peritoneum. I then passed the finger inside and turned the uterus out before putting on other forceps. I saw that the right ovary was badly diseased, and knowing that the carcinoma sometimes returns in these cases, determined to remove both ovaries. I find it much easier to turn the uterus out forward, though many operators, among them Billroth and Schroeder, prefer to turn it backward. If we antevert the uterus we are not nearly so apt to be disturbed by small vessels, and retroversion does not bring the ovarian artery and ligament into view. In anteversion we can cut under the eye, not by feeling as in retroversion. The highest temperature this patient has experienced so far was 100.2 F., which was on the third day. My purpose was to allow

all the tissue inclosed in the forceps to slough off, thus getting rid of more doubtful matter. We gave no vaginal injection till odor commenced. We had no drainage-tubes —no antisepsis; nothing but asepsis. She was operated on in this amphitheather, and you had a patient in, suffering from erysipelas, and a lecture on the same just immediately preceding the operation. I do not wish you to be led astray by this, for one swallow does not make a summer. I am as much afraid of erysipelas as of anything. Asepsis is the great thing. We have been for a long time on this subject, "stopping at the spigot and wasting at the bung-hole." (This patient passed through an uneventful convalescence, and was discharged from the hospital at the end of four weeks.)

Curability of Tumors of Cancerous Appearance by Injections of Bichloride of Mercury.

BY DR. POUCEL, SURGEON OF THE HOSPITALS AT MARSEILLES,
FRANCE.

Translated from *La Semaine Médicale*, of September the 10th, 1890, for the
CINCINNATI MEDICAL NEWS by E. A. QUETIN, Juge de Paix Du
Canton de Tonnerre.

IN 1884, in a work upon the influence of the chronic congeston of the liver in the genesis of diseases, I said, in order to explain the production of cancer, that perhaps the microscope would some day discover a bacillus microbe to the local degeneration of which we have given the name of cancer.

Since then, endeavors have been made to demonstrate the parasitic origin of that disease. Some authors thought they had discovered its bacillus, but others denied promptly every pathogenic influence to the micro-organisms found in cancerous tumors. They went so far as to assert that this micro-organism was not necessary for the explanation of the clinical phenomena of cancer.

Assuredly the carrying of a living cell (cancerous or other) through the venous vessels, and especially through the lymphatic vessels, will be like a seeding of homogeneous tumors, which shall develop wherever those cells will find conditions favorable to germination. But this mechanism which explains the generalization of the tumor does not throw any light upon its genesis. This mechanism, moreover, is the same

for the tuberculous tumor, of which the bacillary origin is no longer denied. Precisely as is required for the formation of the tubercle, the cancerous bacillus must possess conditions favorable to transmissibility which constitute the hereditary predisposition and tendency. When those conditions are existing, the pullulation of the micro-organism becomes possible at its contact and the *épithélia* become irritated, proliferous, and lose their shape, thus characterizing cancer.

Starting from that hypothesis, I have undertaken a series of investigations at the hospital of the Conception in Marseilles.

I had just obtained a very prompt and unexpected cure, considering the state of the subject, in the treatment of a malignant pustule dating from three days, by the injections of sublimate around the eschar. Those injections had demonstrated to me: 1st, the innocuousness of the bichloride in regard to the tissues. 2d, its efficacy against the micro-organisms absorbed by the lymphatic vessels.

Therefore it seemed to me indicated to apply this treatment to cancer, or, not to prejudge anything, to tumors having a cancerous aspect, of which the bacillus (if there is one) is carried through the same vessels.

Up to this time, seven patients underwent this mode of treatment, and, as details here are of some importance, I give the resume of my observations.

My first patient was a woman without syphilitic antecedents, whom I had long treated with iodide of potassium. On the 10th of February last she came into my service for an ulcerated cancer of the right breast dating back ten months. The tumor, indurated and knobby, occupied all the mammary gland; the nipple is retracted, the ulceration existed in the inferior part of the tumor and produced an abundant and fetid discharge requiring several daily dressings. The axillary ganglia seemed untouched, but there are two cutaneous nodules, one at the superior part, the other at the internal part of the breast.

The tumor was movable and the general state was good (with the exception of an aortic lesion that intervened in the course of a rheumatism, fifteen years before).

On the 10th of Febrary, injections were made into the tumor itself, and by preference into the most indurated points, of three milligrams of bichloride in solution (that is, three syringes of one gramme into six punctures).

No mercurial salivation, but there was a certain degree of inflammation of the breast.

One month later, the patient came again, the tumor had decreased in volume, the discharge was less abundant. Another injection of three milligrams, on the 12th of March, no reaction. Four days later, a third injection. The breast was manifestly smaller, its suppleness was almost normal. The tumor was hardly discernible, and the discharge scarcely stained the linen in twenty-four hours.

Then I attacked one of the cutaneous nodules, having previously had Dr. Pantaloni, Surgeon-Major, with the student on duty, to verify its induration and size; four days later, at the following visit, the nodule had disappeared. It required two sittings in order to cause the second nodule to disappear (probably on account of the difficulty to force the liquid to stay in that tissue of a ligneous consistency.)

A short time after, the woman died during an attack of angina pectoris.

I treated without success two other patients in the service. One eighty-one years old had an osteosarcoma of the tibia with ulceration of a considerable size, with degeneration of the ganglia and cancer on the right side of the thorax. The other a woman very old also with a widely ulcerated cancer of the breast, and having an advanced cachectic condition.

My fourth patient was a pensioned functionary, having entered the room of the hospital boarders in the month of February, with a periganglionary phlegmon suppurating in the groin. After incision, we found a hard ganglion the size of a walnut, this solitary ganglion occupying the middle of the chain. This patient had an indurated chancre, twelve years ago. I treated him with pills of protiodide of hydrargyrum and syrup of Gibert. The tumor increased, became knobby and soon larger than the first; it obstructed the inguinal canal, from which an old and considerable hernia protruded into the scrotum.

I sent for the patient's son, a surgeon in the navy at Toulon. He shared my opinion about the cancerous nature of the tumors, and accepted the treatment by injections of bichloride of mercury; the specific treatment was interrupted.

Twenty-three days after, that is, after ten series of injections, (three milligrams every other day) the tumor had disappeared and the cure has maintained itself up to this day.

The son of that patient, surgeon in the navy, was not syphilitic, but he had two small ganglionary tumors in the groin. These tumors had begun in Tonkin, about three years ago. At the start they were indolent and soft, similar to some lymphadenomes developed under the influence of some toxemy; but since one year and a half they had become hard and were increasing in size in spite of the most diverse treatments both internal and local, especially quinine and iodide of potassium.

Struck with the good result which he had witnessed in the case of his father, he applied the same treatment to himself, and obtained a complete cure at the end of eight days with a daily injection of two milligrams.

Besides, I have received from him the following observations, relating to a patient whom he subjected to the treatment by intra-parenchymatous injections of sublimate:

"A pensioner of the navy, seventy-four years old, had been suffering for several years from a tumor of the rectum, taken to be hemorrhoids by some, by others a syphilitoma or a cancer.

"When in Febrary last I was called by the patient, I found him very much emaciated and with a yellow complexion. To my inquiries about his antecedents the patient declared he never had syphilis and had been twice subjected to a medication with iodide of potassium, without any benefit.

"Through the anal exploration I ascertained the existence of several knobby and indurated tumors, occupying a surface of om 04 to om 05. Their union formed a tumor the size of a hen's egg, *embodied with the neighboring tissues*. That tumor was ulcerated and produced an abundant secretion.

"I recognized it to be a scirrhus.

"Struck with the results observed in your clinical service with my father and afterwards with myself, I treated that patient with the injections of sublimate.

"For truth's sake I must say that after a period of twenty days, and in consequence of four or five daily injections, the tumor *melted away* so to speak."

My seventh and latest patient was an old maid, fifty-eight years old, a country woman, for some time much emaciated; she presented in the left breast a tumor, hard, knobby and movable, the size of a walnut, occupying the supero-internal part of the mammary gland. No retraction of the nipple.

No ganglionary alteration. The afflicted woman always enjoyed good health, and in her family there is no cancerous, syphilitic or tuberculous antecedent.

I injected into the tumor one grammie of liquor of Van Swieten, and I renewed the injection after an interval of eight days. I saw the woman again three months later. There was no more any trace of the mammary tumor, but on a level with the chondrocostal articulation of the fifth left rib there existed a painful circumscribed tumefaction, without redness or heat of the skin. The absence of any hereditary or acquired antecedents rendered the etiological diagnosis difficult. One single injection of bichloride into that thickened periosteum brought at the end of three days the complete resolution of the induration and the cessation of pains. The sick woman has actually recovered; her general state is satisfactory, and she only continues a tonic treatment.

I have actually in treatment four patients. One of them, treated by a colleague, has had after some injections a total dissolution of the tumor. We are practicing injections upon the indurated and knobby borders and center of the cancerous ulcer.

Another woman, affected with enormous polyganglionary tumors in the left super-clavicular region, probably of a tuberculous nature, is in course of amelioration in consequence of two injections.

A third woman presents a double tumor of the same nature occupying the super-clavicular and sterno-mastoid regions with compression of the recurrents and intense fits of dyspnoea. Two daily injections made during ten days have brought the cessation of the crises, the reduction and softness of the tumors.

The fourth woman, affected with a very large cancer of the breast occupying all the gland, with retraction of the nipple, shrinking of the skin and invasion of a corresponding axillary ganglion, is on the way of amelioration, notable after nine sittings of one injection, rarely of two.

I dare not say, from so restricted a number of observations, that the treatment of cancer is found; but this we can affirm, that certain tumors, of a *cancerous appearance*, are liable to disappear and *melt away* under the influence of injections of sublimate, and the chances of success will be obviously the better as those injections shall have been practiced at an earlier period of the affection.

I say of *cancerous appearance*, because with subjects

affected with hereditary syphilis, we sometimes see the unfolding of tumors borrowing most of the clinical characteristics of cancer. Nevertheless, in those cases, iodide of potassium is the touchstone; it dissolves the pseudo-cancers of a syphilitic origin and remains without effect against the real cancer; then, several of the patients above mentioned had gone through a treatment of iodide; we have therefore almost a certainty that in all those cases we had to deal with real cancers.

Therapeutics seems to establish what histology is still discussing; namely, that those tumors of a cancerous appearance, and perhaps all tumors, are produced by a (microbe) bacillus characterizing each cellular malformation, since several of them, and all perhaps, may be cured by an early (anti-microbial) treatment.

Here now we give the mode of applying the treatment:

We inject, with the syringe of Pravaz, after taking the most rigorous antiseptic precautions, in two or six punctures, from one to three grammes of the liquor of Van Swieten into the most indurated points of the tumor. After injecting; it is necessary to retain the liquid which otherwise might be rejected on account of the hardness of the tumor.

These intra-parenchymatous injections are not painful, they produce no salivation, and may be renewed every day.

The inflammatory and gangrenous phenomena, at times observed, ought to be attributed to the omission of some antiseptic requirement.

When the cure is to come, there are signs of it at the end of a few sittings, twenty at most. I believe therefore that surgeons who have not yet renounced the use of the knife for cancer should undertake it only after trying with their patient the treatment I am commanding.—From the *Temaine Médicale*, 18 rue de l' Abbé de l' Epcé, Paris.

ANTAGONISM OF ERYSIPelas AND DIPHTHERIA.—We reproduce from the *Bulletin Medical* the unexpected conclusions of the work of a Russian physician relative to diphtheria.

Mr. Babtchinsky has just published in the *Journal d'hygiène de Saint Petersburg*, an article in which he points out the antagonism of the bacillus of diphtheria with the bacillus of erysipelas. This antagonism was such that the appearance of erysipelas seemed to bring about the cure of diphtheria in a certain patient. Here are the circumstances

in which Mr. Babtchinsky was brought to discover such an antagonism.

His son was affected with a grave diphtheria and death seemed imminent, when stealthily and without any discoverable cause the patient was affected with erysipelas.

This complication, grave in itself, seemed of a nature to hasten a fatal termination, and in fact, during the first hours of the development of the erysipelatous eruption, the state of the patient grew worse; his weakness was extreme. But on the next day, things had changed, the prostration of the patient had diminished, and amelioration became more marked every day, until the sufferer recovered.

Some time after, Mr. Babtchinsky having in his practice a very grave case of diphtheria and at the same time one of erysipelas, and being encouraged by his previous experience, he concluded to inoculate the erysipelatous virus in the submaxillary region of the diphtheritic patient, and he recovered also.

From that time, Mr. Babtchinsky did not hesitate to generalize that treatment which, so to speak, had been accidental in its beginning; however, as he could not expect to have constantly on hand erysipelatous patients, instead of erysiplatous virus he substituted for inoculation material from a culture of the erysipela bacillus made in some agar-agar.

Fourteen diphtheritic patients were treated with these inoculations; twelve were cured, and with the other two who died, the inoculation of the bacillus having proved sterile, the negative result adds to the confirmation of the efficiency of the new method.

In another instance, six children belonging to the same family had diphtheria. Five were inoculated and recovered; the sixth child, not having been inoculated, died, having been carried away from his home at the first appearance of the disease.

It is remarkable that in every case the erysipelatous processes have invariably remained dormant, without any lasting effect upon the general health, and in all instances the result was a prompt cure of the sufferers.

The effect of the inoculation may be explained by the antagonism of the two sorts of micro-organisms.—From the *Journal de Medecine et de Chirurgie pratiques, rue de Nesle, No. 8, Paris.*

Mississippi Valley Medical Association.

Reported for the CINCINNATI MEDICAL NEWS.

THE 16th Annual Meeting of the Mississippi Valley Medical Association held at Louisville Oct. 8th, 9th and 10th, was the most numerously attended of the various successful meetings of this Society. The programme contained over eighty papers and required rigid enforcement of the limit rule in order for its completion the third day. Dr. John Wyeth's address was a masterly effort filled with wit and the wisdom of his years of surgical experience. A Southern man by birth, and having graduated at Louisville, social honors were heaped upon him. He operated at the Medical Department of the University of Louisville before an interested gathering of physicians, showing his method of bloodless amputation of the hip joint. A reception given by Drs. Yandell and Roberts was highly enjoyable; the visiting ladies were taken out to the Blind Asylum one afternoon and entertained by songs by the pupils and gymnastic exercises, etc. A reception at the Galt House called out all the far-famed belles of the Falls City. Some of the bachelor doctors remained after the meeting had closed, and the staid married men had departed, as the result of the bright smiles of Kentucky's fair daughters.

The only thing which marred the occasion was the illness of Dr. Matthews, the President. He has been suffering for some weeks from blood poisoning caused by a wound, and was unable to preside at but few of the sessions. The Second Vice-President, Dr. C. R. Early, of Ridgeway, Penn., filled the chair in his absence. The First Vice-President, Dr. T. B. Harvey, of Indianapolis, has deceased since the last meeting. Officers elected for the coming year are Dr. C. H. Hughes, St. Louis, President; Dr. J. H. Hollister, Chicago, First Vice-President; Dr. S. S. Thorn, Toledo, Second Vice-President; Dr. E. S. McKee, Cincinnati, Secretary; Dr. I. N. Love, St. Louis, Chairman Committee of Arrangements; Dr. C. F. McGahan, Chattanooga, Treasurer; Judicial Council: Dr. Murdock, of Pennsylvania, Dr. H. H. Mudd, St. Louis, Dr. D. N. Griffiths, Springfield, Ill., Dr. A. H. Owen, Evansville, Ind., Dr. Xenophon Scott, Cleveland, Ohio, Dr. Walker, Detroit, Dr. D. S. Reynolds, Louisville. The next meeting will be held at St. Louis the third week in October, 1891.

Dr. Francis Dowling, of Cincinnati, read an interesting paper before the Mississippi Valley Medical Association on the Prevention of Myopia. He said the simplest and most concise definition of Myopia is given by Dr. Landolt, of Paris, when he says that "Myopia is present whenever the retina is situated behind the focus of the dioptric system of the eye." Some authorities are of the opinion that in the majority of cases myopia is congenital or inherited, or at least there is a predisposition inherited from the parents. Cases before eight years are rare, but from ten to eighteen years of age it makes its greatest progress. Among predisposing causes are arrests of the development of the sclerotic coat of the eye, a peculiar formation of the globe, and especially chloroiditis in all its various forms. Among determining causes are the acts of convergence and accommodation in using the eyes for such work as reading, writing, sewing, etc. The trouble prevails more extensively in Germany than any country. In examination of ten thousand school children, one thousand were found more or less near-sighted. This brought about a better state of affairs in regard to lighting and ventilating school buildings, printing books, etc., and the percentage was lessened where the reforms were carried out. The doctor recommended several points to be observed in myopic subjects. A child predisposed to this disease should not be sent to the public schools as now constituted, but to some private class, where the hours and tasks could be arranged to suit the condition of his eyes. Second, the sanitary condition of schools should be first class, ventilation, light, etc. Third, whenever the physical condition becomes affected, all work with the eyes should be suspended. The general health of a myopic person should be carefully watched, as they are frequently burdened with some constitutional taint, as scrofula or tuberculosis. Fourth, young persons thus disposed should never study at night time. If artificial light be used at all, the electric light is better than oil, gas, etc. Fifth, the book used by one predisposed to myopia should be printed in clear, large type, and the Latin letters are less fatiguing than the German or any others. The eyes should be kept about thirty centimeters from the text, and the eyes frequently rested. Seventh, the wearing of glasses is optional, as they have little if any value in checking the progress of the affection. If the disease is advanced, proper concave glasses for all near work may relieve the strain on

the muscles of convergence. Eighth, in pronounced cases the doctor has sometimes found benefit from paracentesis of the cornea by means of a fine needle. After puncturing the cornea he causes the fluid to escape from the anterior chamber slowly by pressing the cornea with the upper and lower eyelid alternately.

Translations from Our Foreign Exchanges.

Translated for the CINCINNATI MEDICAL NEWS, from the French, by Dr. Ilowy, Cincinnati, Ohio.

OF THE POSITIVE POLAR ACTION OF THE CONSTANT GALVANIC CURRENT ON MICROBES AND MORE PARTICULARLY
ON THE BACTERIA OF ANTHRAX.

BY APOSTOLI AND LAGUERRIERE.

(A note presented to the Academy of Medicine (Paris) April 28, 1890.)

THE antiseptic and microbicidic action of the galvanic current observed by one of us in 1886 has been the object of our common investigations for the last two years.

In a sealed note deposited with the Academy of Sciences August 12, 1889, we have laid down the first results of the experiments undertaken in placing the two poles at the two extremities of the same test tube containing bouillons of culture, and at short distances from each other. All our experiments have had the control of cultures and of inoculations into animals (rabbits or guinea pig). Here are our first and principal conclusions:

I. The action of the constant galvanic current on cultures is in direct rapport with the intensity of the current measured by milliamperes.

II. For a like intensity, and all other things being equal, the length of the application is of little importance. The intensity of the current remains all the time the principal factor.

III. A current of three hundred milamp. and more applied for five minutes kills invariably the bacteria of anthrax. The further cultivation, attempted with a culture so treated, remained sterile; the inoculation into guinea pigs without effect.

IV. A current of 200 to 290 millamp. applied for five minutes does not destroy so surely and so certainly the

virulence; some guinea pigs will still die, but in a much longer period of time, *i. e.*, more slowly, than the control animal inoculated with the culture before it was subjected to the current.

V. A current of one hundred millamp. and less after an application of thirty minutes does not destroy the virulence; an attenuation is produced which augments with the intensity of the current, and which manifests itself in this, that the animals so inoculated die a day or two later than the control animals.

Since that period we have established that these effects are independent of the thermic influence which accompanies electrolysis. And we have studied the isolated influence of the poles and of the interpolar portion of the circuit.

We can formulate the following complimentary conclusions:

1. The colorific effects of the current can be suppressed and nevertheless the destruction or attenuation of the microbian vitality be obtained.

2. The positive polar alone destroys or attenuates the vitality of the pathogenic organisms, for whom the interpolar action and that of the negative pole is indifferent.

3. The antiseptic action of the positive pole (in a distinct culture medium, entirely separated from the negative pole) is exercised in smaller electric doses than in the first experiments (where the two poles being contiguous attenuate their reciprocal action.)

Thus the positive pole does not destroy at ninety milliamp. applied for a period varying from nine to thirty minutes, but above that, attenuation commences and progresses gradually, to become constant with 100 to 190 milliamp. from the first five minutes.

4. The general conclusion to be arrived at from our investigations is this, that the continued current in so-called medical doses (that is, from ninety to three hundred milliamp.) has no action *sui generis* on the microbian cultures in a homogenous medium, and that its unique positive polar action is limited to the development of acids and of oxygen, as we shall demonstrate in a future paper.—*Un. Medic. d. Canad.*

ARISTOL.

Quinquand and Fournioux describe the preparation of aristol as follows:

First solution :

Sublimated Iodine,	60 gr.
Iodide of Potassium,	80 gr.
Distilled water,	q. s.
(p. 300 cent. cubes)	

This solution is mixed with equal volumes, at a temperature of 15 to 20° C., of the following solution :

Thymol,	15 gr.
Hydrate of Soda,	15 gr.
Distilled water,	q. s.
(p. 300 cent. cubes)	

There is formed a voluminous precipitate of deep reddish brown color; this is ARISTOL (dithymol biniodide) which need only be worked and collected.

Aristol is not toxic; it can be given to animals in doses of one to two grammes per kilogramme of weight without producing any accident. It possesses undoubted cicatrizing properties, even for epithelioma, but it would be an exaggeration to pretend that it could determine its complete cicatrization.—*Ibid.*

Selections.

Treatment of Chronic Bright's Disease.

LEPINE of Lyons: The danger in Bright's disease comes from insufficiency of the renal secretion. This insufficient depuration of the blood by the kidneys leads to uræmia, which is the true danger. It is therefore necessary to make the patient urinate freely, but on condition of not over-exerting the kidneys. It is also necessary to sustain and stimulate the forces of the patient.

The aliment should contain very little albuminoid matter in proportion to fats and hydrocarbons. For the waste from the latter substances is not eliminated by the kidneys. All the substances which in these waste products contain nitrogenous products should be partaken of as little as possible.

Meat should be ingested in very small quantities. Dark meat or high meats, being rich in albuminous waste products, should be strictly prohibited.

Milk, although rich in albuminoids, does not produce much waste material, for all its nitrogen is utilized. It is rich in fat. None of its principles appear to irritate the kidney. Moreover, it is diuretic. It, therefore, not only furnishes no material for the kidneys to eliminate, but by its diuretic power, it helps to eliminate toxic principles already existing in the organism.

In the meantime, most patients restricted to absolute milk diet become disgusted with it, refuse to submit to it, and later on finish by not being able to digest it any longer.

Moreover, there is an advantage in not limiting patients to milk alone; one should allow them vegetables, fresh and dried bread, farinaceous articles, all of which augment the proportion of hydrocarbons.

Again, individual predispositions must be considered in the choice of aliments. What benefits one might harm another. The products of bad digestion are rich in waste materials, which are liable to irritate the kidneys if they are eliminated completely, and which poison the organism if their elimination is insufficient.

The albuminuria ought to be measured day by day.

Eggs, especially the whites of eggs, increase albuminuria, and ought to be excluded from the diet of those suffering from Bright's disease. The same is true of certain salt water fish.

Diuresis is produced by alkaline waters and ptisans. But cardiac lesions, so frequent in Bright's disease, render necessary the use of cardiac remedies. In the first rank of the latter comes crystalized digitalin, in doses from one to two milligrammes. It is prudent not to use this medicine two days in succession, but to interrupt it for several days, so that its elimination may be complete.

Caffeine is recommended in gramme doses, especially by way of injection. Salicylate of theobromine is less active, even in three gramme doses. Strophanthus and squills are to be rejected on account of their irritating action on the kidneys. In the case of arterio sclerosis, iodide of potash gives good results.

Revulsives over the lumbar region are very useful, especially in the period of renal congestion. Repose in bed, well covered, is to be recommended, in preference to vapor

baths, which might prove dangerous. Walking is not to be advised. It is rather harmful, though in a less degree than cold and moisture.

Senator, of Berlin: I recognize the inability of medicine to combat albuminuria. Iodide of potash, though evidently without effect in parenchymatous nephritis, is perhaps very useful in the interstitial form coincident with sclerosis of the arteries, hypertrophy of the heart, etc. Here, evidently, the nephritis is secondary, and iodide is able to cause the albuminuria to disappear, diminish the polyuria and secure a prolonged remission. Semmola, Leyden and others are of this opinion. Milk is a good remedy in appropriate cases, especially in parenchymatous nephritis, where there is little thirst. It is, however, to be avoided in sclerosis with polydipsia.—*La France Med.*

Treatment and Management of Neuroses.

Dr. E. C. Seguin (*N. Y. Med. Jour., May 10, et seq.*) has delivered some lectures to the Medical Society of the University of Toronto, on the treatment and management of neuroses. The following is a brief summary: He divides epilepsy into two groups, organic and idiopathic. In regard to the treatment of idiopathic epilepsy, he is a pessimist as to its curability and has not yet published any case as cured. Concerning the treatment of epilepsy by bromides, it sometimes requires one or two months of experimentation to find the right dose for a given patient. Small children bear larger doses of bromide proportionally than adults. Many epileptic children from two to six years need from forty to sixty grains a day to arrest the attacks. There is a certain proportion in adults between the size and weight of the patient and his capacity for resisting drugs. The existence of organic heart disease, or of a feeble heart with a sluggish relaxed state of the circulation, generally decreases the ability to withstand bromides. Hence the necessity of examining the patient's heart and arteries and of occasionally combining digitalis and bromides. Acne should never serve as a guide to the doses of bromide, as its occurrence depends upon the peculiarities of the patient. In the treatment of idiopathic epilepsy the aim should be to keep up a slight degree of bromism, and this requires extreme care in the first doses and in subsequent variations.

It is one of the most delicate tasks in medicine to keep a patient steadily at the point of therapeutic bromism for several years, avoiding truly toxic effects and not allowing the nervous apparatus to re-acquire enough excitability to permit of an attack. He says there is no difference between the anti-epileptic action of the different bromides, and that there is no advantage in combining them. In regard to the time of administration his first general rule is to give as few doses *per diem* as possible. Another rule is to give most of the bromide at a time, and four or six hours before the attack should occur, if they recur with any regularity. Where the fits occur at night he gives but one dose and that in the evening. In other cases where the fit is liable to occur just before waking, the patient should be roused at two or four A. M., and take part or whole of the dose. The first dose of the day should be given on waking if the stomach will stand it. In regard to the uniformity of dosage from day to day and week to week, in a few cases of *grand mal* in which attacks occur only at night, when the proper dose has once been discovered it is not necessary to make any change for months or even years. In cases where the attacks occur at intervals, which may be quasi-regular, as pre-menstrual, the daily dose may be increased just before the dangerous period and then decreased in a few days. The reason for increasing the dose may be increasing age and size of young patients, particularly the approach of the menstrual function, the exposure of the patient to unusual excitement or fatigue. When the patient has been three years without any manifestation of the disease, systematic reduction of the dose may begin. The seasons of the year require some variation in the dosage. Larger doses will be borne in autumn and winter. During the attacks of temporary illness the dosage should be reduced. In some cases of epilepsy he combines chloral with bromide in the proportion of five grains of chloral to ten grains of bromide of sodium. Good results are obtained from combining with bromide a free use of strychnine and atropine or belladonna, giving usually the sulphate of strychnine dissolved, and diluted nitro-muriatic acid. Digitalis and ergot have seemed to succeed in some cases of *petit mal*. Digitalis, strophanthus and caffein are given when the heart is weak, or peripheral circulation sluggish. Iron and cod-liver oil are useful in some cases of epilepsy. In regard to the treatment of chorea our mainstay is arsenic. He

advises giving fifteen drops or more of Fowler's solution three times a day. The most important factor in the successful treatment of chorea, especially in its chronic form, is absolute rest, which should be mental as well as physical. In chorea, eye strain is a secondary cause of much importance, and some choreics should have ocular defects cured. The true pathological cause or condition of chorea is, however, deeper than ocular defects or phimosis or cardiac disease; that is, in all cases there is a fundamental defect in cerebral power. He says that exercise in the ordinary sense of the word is not beneficial in chorea, but that during convalescence the practice of a few gymnastic movements under a teacher's or parent's guidance, and without any one else present, may prove an advantage. In regard to migraine, he calls attention to its frequent association with ocular defects, and recommends ophthalmoscopic examination in all cases. For the treatment of this disorder cannabis indica, belladonna, atropine and hyoscyamine are advised. They do good by reducing the accommodative effort of the eye and relieving the strain.

As extract of cannabis indica is of very uncertain strength, either Squibb's or Herring's should be used, as they are reliable. The commencing dose should be $\frac{1}{6}$ grain combined with 1-60 of arsenious acid, or with iron or digitalis, according to indications, in pillular form three times a day before meals. Each week the dose of cannabis indica should be increased $\frac{1}{6}$ grain until it produces a light-headed, semi-drowsy, dreamy state. Male patients can usually take a grain three times a day. Women can seldom take more than half that amount. This maximum dose should be kept up many months or a year or longer. Diet intended to correct lithæmia should be adopted, as this is often associated with migraine. During the paroxysm of migraine the regular medicine should be suspended. The two chief remedies for migraine are antipyrine and caffein. The former should be given in a single large dose before the paroxysm comes on, if possible. Fifteen or twenty grains to the female patient, twenty or thirty to the male. Caffein is good in cases having optic aura or premonitory symptoms, hemianopsia, or a hazy vision a few minutes before the pain appears. He does not adopt the usual classification of angio-spastic and angio-paralytic. He holds that in all attacks there is a spasm of the arteries at first and dilatation later. Neither

morphine nor opium should ever be given for this affection.

For *trigeminal neuralgia* he recommends Duquesnel's crystallized aconitine. A pill of 1-200 of a grain is given twice a day to women, three times a day to men, gradually increased until two pills every three hours are given and physiological effects are obtained. These are tingling and numbness in the face, tongue, and extremities, with a sense of chilliness, usually marked along the spine. Having found the dose of toleration, it should be kept up daily for several weeks after the pain has ceased. With this remedy red iodide of mercury should be given, dose gradually increased from 1-20 to 1-5 or 1-6 of a grain combined with iodide of potassium. As a case of this affection approaches cure, there are sometimes spots of exquisite sensitiveness on the face and head, which, if irritated, will produce a return of the neuralgia. Blistering these spots will cause them to disappear. Cod-liver oil should also be given in this disease.

For the treatment of *exophthalmic goitre* he also recommends aconitine in doses to produce tingling of the lips and extremities, to be continued for days or weeks, occasionally stopping for a few days. This reduces the pulse rate and arterial tension. In some cases bandaging the eyes reduces the ophthalmia. A soft pad of cotton is placed over each eye and a flannel bandage is applied to produce gentle pressure. At first this should only be used for an hour or two twice a day, later for periods of two to four hours. Sometimes it is left on all night.

Concerning the diet and hygiene of nervous patients, he says that lithemia and oxaluria frequently accompany neurasthenia, and that the excessive use of fatty and starchy foods is a potent cause of this condition. In regard to diet for nervous patients generally, they should drink large quantities of water, and as they usually avoid a diet of fatty foods, physicians should insist on their eating pork, fat roast beef, butter, cream, and using cod-liver oil. These should be used in abundance and persistently. Sweet and starchy foods should be eaten very sparingly, as they require to be transformed into food by complicated chemical action within the body, while oil, butter, cream, and fat are already prepared for emulsion. Oranges should not be eaten before breakfast, as the acid they contain checks the flow of gastric juice. All green foods of the spinach group are of special

value. Soups are considered indigestible and often harmful. Stimulants are injurious to neurasthenia. For persons of delicate digestion milk should not be taken with solid food. The notion that animal food is bad in convulsive disorders is a mere fad. Phosphorus, when given, ought to be administered in alcohol and glycerine, or dissolved in oil.

The *rest cure* for neurasthenia should never be attempted at home. Stimulants in neuroses are generally objectionable, as they weaken the patient's power of resistance. They should only be prescribed on the clearest indications. Morphine should not be given in hysteria, and should always be given with the greatest caution. Bromides should not be given for insomnia, as they have no tendency to produce sleep. They should not be given in traumatic neuroses, as symptoms of this disease may be aggravated by their use. Dr. Seguin gives a cup of black coffee to dyspeptics in the morning, and believes it a valuable remedy in nervous disorders.—*Review of Insanity and Nervous Diseases.*

Early Operations in Purulent Peritonitis.

BY JOSEPH PRICE, M.D., OF PHILADELPHIA.

Read before the American Medical Association, Section of Surgery,
May, 1890.

IN operations for purulent peritonitis, the results have been almost uniformly satisfactory. Dr. Bantock, in a late discussion, said that in opening the abdomen for these cases, he had been very much disappointed with the results. Possibly, he says, he operated too late, but always with unsatisfactory results—drainage did not seem to make any difference, for all the patients died. Such an experience from such an operator is a most telling argument for the early interference which he has advocated in other abdominal troubles.

No case of general puerperal peritonitis will recover without operation. Where there are simple inflammatory signs without localized mischief, which is the focus of the general trouble, recovery will follow general treatment. If there is pus in these cases, the necessity for early operation is as much to be recognized as in any other case or set of cases in abdominal surgery. There is but one treatment for suppurative peritonitis—section, irrigation and drainage.

Postponement is more dangerous than the operation, and at the worst only hastens a result which is certain to follow without operation.

In the *Medical Mirror*, May, 1890, is reported a case of general peritonitis, from appendicitis, in which the patient died on the thirty-first day. The results of delay are here too evident, when we take in consideration the numerous cases of appendical trouble, now relieved by prompt operation.

The late Lexington disaster, in which Colonel Goodlow lost his life, by a delay in operating of twenty-four hours, followed by another case in the same city, in which prompt intervention saved the patient, who is now active and well, is also a lesson in cases of this kind.

Further, to illustrate the subject, I introduce the following cases of my own. Other recent illustrations could easily be cited, but these are sufficient:

CASE I.—Mrs. B., æt. 28 years. Seen five weeks after labor. High temperature; rapid pulse; rapid progressive emaciation; profound sepsis. Abdominal section revealed thickened omentum adherent over entire pelvis; right pyosalpinx and abscess the size of an orange in the ovary; universal adhesions; six inches of ileum cheesy and disorganized to the mucous coat along the line of adhesion on the right side. A knuckle of bowel was opened in enucleating the appendages; it was trimmed and stitched; there was purulent peritonitis, and one pint of pus free in pelvis, from leakage; appendages removed; cavity irrigated and drained; recovery.

CASE II.—Mrs. M., æt. 24 years. Seen twenty-one days after labor. Abdominal section showed acute puerperal pyosalpinx on the left side, and general purulent peritonitis; bowel, omentum, and pelvic organs matted together by friable adhesions; left tube gangrenous; right tube removed; irrigation and drainage; recovery.

CASE III.—Mrs. W., æt. 36 years. Seen twelve days after labor; most profoundly septic. At the section universal friable adhesions were found; both appendages absolutely gangrenous; uterus large and soft, with cheesy walls; removal of both appendages; irrigation and drainage; recovery.

CASE IV.—Mrs. F., æt. 23 years. Seen four weeks after labor; removal of both appendages for left pyosalpinx and ovarian cyst; right tube occluded, adherent, and acutely

inflamed ; adhesions universal ; general peritonitis ; irrigation and drainage ; recovery.

CASE V.—Mrs. S. Seen two years after labor. She had puerperal fever and was in bed nine months ; since then has been a hopeless invalid, with loss of locomotion, constant agonizing pain, great emaciation, constant nausea and recurring attacks of peritonitis. I removed a left pyosalpinx and ovarian abscess ; dense bowel adhesions ; omentum, bladder, and uterus glued together ; irrigation and drainage ; recovery from the operation and cure.

It should be noted that :

- 1st. All were cases of true puerperal "fever."
- 2d. All were saved by section, after well-directed medical treatment.
- 3d. The operations were undertaken to save life, not to demonstrate ideal surgical procedures.—*Phila. Med. News.*

Some Therapeutic Uses of Buttermilk.

THIS is the title of a paper by Stanley M. Ward, M.D., of Scranton, Pa., in the June number of the *Therapeutic Gazette*. He relates a case of Bright's disease reported by Dr. Henry D. White, in which no alleviation was brought about by the ordinary remedies. The patient finally, by her own solicitation, was given buttermilk, the use of which was followed by the happiest results.

Another case is related in which on several occasions the urine under heat and acid was almost solid in the test tube. The ordinary drugs failed to give any relief. The patient began taking buttermilk, two quarts a day. Its effect being markedly favorable, the quantity was increased, and from this time the chief reliance was put on this agent, and the patient finally used from six to eight gallons a week.

Diminution in the quantity of urine passed, constipation and headache followed invariably if the supply of buttermilk became exhausted ; and, finally, an examination of the urine, made one year and nine months after the first observation, the patient during a great part of this time having been engaged in his usual avocation, revealed the fact that minute quantities of albumen were still present.

He speaks of its use in stomach affections, the principal symptoms being eructations and vomiting. In cholera infantum the stomach may often be quieted by interdicting everything else, and using a few drops of fresh ice-cold

buttermilk at intervals, ranging in length according to the severity of the case.

We have used buttermilk in our practice since the fall of 1881, as a therapeutic agent—food or drink, we hardly know which. When an acid was craved by the patient, and lemons were not on hand, fresh, cool buttermilk was ordered; quantity of buttermilk was restricted to one-half gallon a day. He relied upon this fluid food for about six weeks until complete recovery; although he was tempted with and given food of various kinds, he retained a relish for buttermilk.

The buttermilk craze is on, and while the physician must not lose his head, it is a safe rule to utilize agents within the reach of all, both as a food and a medicine, when they meet the indications, and never despise the day of small things, and the use of common things.—*Kansas Med. Jour.*

Phantom Tumors—Abdominal Dropsy—Ovaritis—Fibroid Tumor of the Uterus.

BY WILLIAM GOODELL, M.D., PROFESSOR OF GYNECOLOGY.

REPORTED BY LEWIS H. ADLER, JR., M.D.,

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A Clinical Lecture delivered at the Hospital of the University of Pennsylvania, September 24, 1890.

GENTLEMEN: The first case that I present to you is one of a kind that often puzzles physicians. The patient is past the age of forty-nine years; her youngest child is over twelve years of age. An enlargement of the abdomen has been present for seven years, and she has intermenstrual pains. In order to ascertain her condition, I shall examine her first without an anaesthetic and, finally, under ether.

Phantom tumors occurring in this region, on superficial examination resemble genuine tumors and are very deceptive, but usually they will be found to be resonant on percussion.

In this case there is a prominent and resonant abdominal tumefaction, but I find that I can come to no positive conclusion until the woman is etherized. If there be a tumor, the intestines clearly lie above it. When she came to my office, a short time ago, there was even more distention than

now, owing, perhaps, to greater flaccidity of the abdominal walls, and, consequently, to their greater distention by the bloated intestines.

Before proceeding further with this case, I shall have the patient removed from the clinic-room and anæsthetized, in order to be more certain in rendering my decision. If there be no fluctuation, there is no liquid; and if in front of the tumor there is a resonant mass, due to the accumulation of fat and gas, the only way for us to dispel this doubt, or, at least, to lessen greatly the difficulty of the diagnosis, is to use ether, for, the presence of the gas being mostly a nervous phenomenon, it is largely dispelled by this means.

Phantom tumors most frequently occur in women at the time of the menopause. Many physicians make the mistake of imagining women with such an enlargement to be pregnant, and are surprised and mortified to discover their error. A case will occur somewhat in this manner: A woman approaches the age of forty-five years; she loses her periods, fattens, and her abdomen becomes distended with gas. She at once concludes that she is pregnant, and announces the fact to her husband and intimate friends. Those in the secret patiently await the advent of labor and hold themselves in readiness to congratulate her upon the Benjamin of her old age. The family physician defers his summer vacation, and everything, even down to a handy pin-cushion, is ready for the little stranger. But, lo! when the expected time arrives all are woefully disappointed. Days and weeks pass by, but still no child is born. The whole affair was due to fat and gas. If the woman had been examined under ether, such a failure in diagnosis would not have been made. Nor is this mistake of imagining themselves pregnant, when they are not, confined alone to human females. A bitch will make all preparations for her expected litter, and be disappointed for exactly similar reasons.

Phantom tumors are provoking, as well as deceptive, to physicians. A woman goes from one to another, and is not benefited. The reason is because she is not anæsthetized and examined *per vaginam* by the double touch. Sir James Y. Simpson, the distinguished gynecologist, now dead, meeting in his practice one of these patients who had thus, without etherization, been going from one doctor to another, put her under the influence of an anæsthetic, and that, too, in the presence of her sister, who was also allowed to examine her abdomen. As the patient recovered con-

sciousness, she still contended that she was pregnant, when her sister contradicted her by saying: "Hush, Hettie, hush! ye ha' nae chlel in your wame, for I felt your back-bane."

In the patient before you, as her bowels move freely, the abdominal swelling can not be due to any obstruction in the intestines, because where faeces can pass, gas can pass. As I previously stated, this distention is often due to nervousness. I had a patient who used to come to my office for examination, upon whose abdomen I could have beaten a "reveille." When she was etherized, the distention wholly disappeared.

In the present case Dr. Taylor is doing the percussing for me, as my fingers are engaged in holding the abdominal wall. I grasp the abdominal walls firmly in my hand, and when the woman becomes thoroughly etherized, and consequently entirely relaxed, I shall be able to obtain even a better hold. While I am so engaged, Dr. Taylor elicits no fluctuation in the portion of the abdomen remaining below and finds no evidence of a tumor.

I also thought that an abdominal hernia might be the cause of all this woman's trouble. There is sometimes a natural separation of the recti muscles, allowing a protrusion of the intestines, which constitutes what is known as ventral hernia; and, moreover, this affection sometimes follows ovariotomy.

The rule by which you are to guard against mistakes is to insist upon the use of the *double touch*, as well as the examination *per vaginam*. By these means I am enabled in many cases to outline accurately the size of the included uterus.

In the present case, by passing two fingers of the left hand into the vagina and then meeting them with the fingers of the right hand placed on the outside of the abdomen, I find that the left ovary is doubtlessly enlarged; the other ovary may also be in the same condition. But this condition will not account for the largeness of the abdomen, which is to be explained not alone by omental fat, and by the thickness of the abdominal walls, but also by their flaccidity and distention by large quantities of gas.

The treatment upon which I should like to put this woman is that of asafoetida in large doses—not one or two grains, but nine grains, three times a day, before meals, in three grain *sugar-coated* pills, so that she will not taste them after they are swallowed. After three days, this trouble of tast-

ing the medicine generally ceases, and she would then be able to take twelve grains three times a day if needful.

Now, in this case there are some, but not sufficient, indications to perform abdominal section. In former times the exploratory incision was done even more than it is nowadays, in order to arrive at a positive diagnosis; but this is not necessary at present, owing to the introduction of anaesthetization as a preliminary step to a thorough examination. Therefore, you will have learned another golden rule by which you may be guided in your practice, and that is: if a woman with an enlarged, resonant, but not fluctuating, abdomen comes to you, act upon the supposition that there is no tumor present, but only gas. If you then err, it will be on the safe side.

ABDOMINAL DROPSY.

Physicians sometimes mistake pregnancy for tumors, because they are liable to meet with cases of pregnancy when they are not expecting them, and when they ought, morally, not to occur, even among the higher classes. In such cases always inquire about the menstruation, and if it has ceased, always think first of pregnancy as being the cause of its stoppage. If the case be one of dropsy, it has its cause somewhere in the great tripod of life—the heart, the liver, or the kidneys—and means a constitutional trouble with constitutional disturbances. We get in such cases, resonance. Why? Because the intestines are floated upon the fluid, unless they be bound down by old inflammatory adhesions, or unless the belly is so distended that a wide space exists between the intestines and the abdominal wall, which space is filled with fluid.

OVARITIS.

The next patient is twenty-three years old. She has been married for three years and has an abdominal growth. She complains of a pain in the left side of the abdomen, running down the inside of the thigh, along the course of the genito-crural nerve. Such pain is sometimes due to ordinary sciatica, but it is not so in her case. Her menstruation is painful and profuse, which may mean something or nothing.

I now begin our examination, in which I use my finger, not the speculum, which, as a rule, should be reserved for treatment only, for upon one's finger one can acquire a degree of sensitiveness, of education, which must always remain strangers to any instrument. Upon making this

examination, I find what is called a *sickle-shaped* cervix. The womb is pushed over to the left by a tumor on the right side, which is round; not in the form of a sausage, like that of a prolapsed and enlarged tube. Therefore, it is an ovary, and, if it arises from a constitutional cause, a cold, a peritonitis, or any of the exanthemata, as it does in this case, the other ovary is most apt to be affected, and both will have to be removed. This, while it is a painful operation, is not a very dangerous one.

Such constitutional manifestations of cold often follow exposure, especially such indiscretion as sitting upon cold steps at night during menstruation.

After marriage the great cause of ovaritis is the contraction of gonorrhœa from the husband. Then there may be much inflammation, an abundant exudation of plastic lymph, and the organ becomes bound down by adhesions to adjacent structures, causing upon each movement of the woman sickening pain similar to that sometimes experienced in the analogous organ in the male. The other ovary, not primarily the seat of any germs, may be all right.

FIBROID TUMOR OF THE UTERUS.

Double touch proves the gynecologist. I know of a doctor, well posted on general medicine, who, when a woman came to him for treatment for some obscure pelvic trouble, after an imperfect examination, simply inserted a pessary into the vagina. It is needless to say that, even as a palliative measure, it was a failure. A rule, then, for you to remember henceforth is that if a physician does not know how to examine a woman by the *double touch*, he knows nothing about gynecology. A recent graduate, whether from this or any other first-class college, can do more in a case like the patient I now bring before you than many of the old physicians who did not have an opportunity to learn these methods of diagnosis at college, and who since have not thoroughly kept up with the subject.

This woman is forty years of age, and has been married for many years. Seven years ago she miscarried and gave birth to a dead foetus. For five years subsequent to this abortion she had no menstrual flow. Whenever you meet an abortion, no matter where, the question that should first come into your mind is: Can this be due to syphilis? Examine both the man and woman, if possible, asking not only whether they ever had syphilis—for they may not

know what that means—but whether they have ever had a sore on their privates, or the mucous patches, eruptions, and other manifestations of the disease, upon the other parts of their bodies. In this case, the first thing that strikes us in our examination is that the nymphæ are very much enlarged. If she were unmarried, I should think first of self-abuse, though I should not be certain that this was the cause. You can see that these nymphæ are flattened and elongated. In the Hottentot women they extend nearly to their knees, and are considered ornamental.

I now pass in the uterine sound, and, in doing so, resort to the "master's wrinkle." This consists in introducing the instrument into the cavity of the uterus by pressing the handle down, raising it, and then depressing it, when in it goes. We have here a large fibroid of the uterus. I think there is also a smaller fibroma to the right of the uterus—a sub-peritoneal fibroid.

What is to be done in such cases? Now, as this is a tumor that rarely kills, the question is whether the woman is suffering sufficient pain or annoyance for me to operate. The uterus might be removed; but this is hardly ever needful in such cases. The operation generally resorted to is oophorectomy, because by this means the monthly flow of blood to the organ is stopped, and the tumor ceases to grow, from lack of nutrition. If, however, you refuse to operate, or the patient be afraid to run the risks incident thereto, you can put her on the two medicines, ammonium chloride and fluid extract of ergot—say, ten grains of the former, which is the great absorbent, and from fifteen to twenty drops of the latter, which, by cutting off the blood-supply from the tumor, cause it to cease to thrive and will gradually make it lessen in size. These medicines are to be taken three times a day, and preferably at meal-times, lest from the action of ergot on the vasomotor nerves, nausea and digestive disturbance be occasioned. Again, fibroid tumors being flesh tumors, not cystic, they increase slowly in comparison with fluid tumors until the change of life, when they either cease to increase or lessen in size. If the change of life is deferred until later, these tumors may become fibro-cystic, and sometimes cancerous; but, as I have never met with an instance of the latter in my practice, when women become nervous and question me on the subject, I hoot at the idea. If, on the other hand, a woman with a fibroid tumor be not well off pecuniarily, so as to live a life of ease,

nor free from pain, I generally advise the removal of her ovaries. In this case I shall put the woman upon the above mentioned medicines until I can more thoroughly study her case.

These three cases, then, are of great interest, because they are intensely practical. The first teaches the lesson that phantom tumors are to be studied most carefully, and that, too, with the woman under ether, as well as that the great medicine for phantom tumors is *asafoetida*.

The second case is one of ovariitis, following scarlet fever, in which, as both organs are nearly always affected, the treatment consists in double ovariotomy.

The third case is that of a uterine fibroid, which can be treated either by laparotomy or by the medicines, ammonium chloride and ergot, always remembering that, if the woman can be tided over the years of her menstruation, the tumor will then cease to give trouble and decrease in size, even if it does not entirely disappear.—*Phil. Med. News.*

The Treatment of Tuberculosis of the Larynx.

TUBERCULOUS disease of the larynx is so distressing a complication of a most distressing malady, that every observation upon its treatment is deserving of attention. While this condition does occur as a primary localization—a fact long disputed, but finally settled by the studies of J. Solis-Cohen, published in 1881—it is most frequently associated with pulmonary tuberculosis. The special therapeutic problem to be solved, then, is not so much how to bring about the absolute recovery of the patient—for this is bound up with the larger question of the treatment of internal tuberculosis in general, and pulmonary tuberculosis in particular—but how we may bring about healing of the local lesions, or how we may mitigate the sufferings to which those lesions give rise.

It has long been held by competent authorities that in a certain small proportion of cases tuberculous ulceration of the larynx will heal under measures of cleanliness and antisepsis, such as washing with detergent sprays and the insufflation of iodoform—proper attention, of course, being given to general measures of nutrition. Of the truth of this view we can recall a most remarkable instance, that of a patient who came under our observation in 1883, and is still

living, apparently well. This man, a commercial traveler, learned how to insufflate iodoform into his own larynx, and for more than a year practiced this expedient thrice daily while on his journeys.

It must be admitted, however, that the proportion of such cases is small, and hence, since the discovery of the tubercle bacillus has led to general acquiescence in the theory of the local origin of the morbid processes, renewed efforts have been directed toward discovering feasible methods for radical extirpation of the diseased tissues. Instances from pre-bacillary times were not wanting, in which good results had followed such measures, instituted on the general principles of good surgery. Thus, J. Solis-Cohen, in 1870, excised the epiglottis of a woman with phthisis, on account of limited tuberculous ulceration, and the patient was reported alive and well twelve years later.

The great difficulty in the majority of cases, however, lies in the comparative inaccessibility of the lesions. Tuberculous lymph-glands of the neck, tuberculous joints, and the like, are readily amenable to direct surgical procedures. Manipulations within the larynx are not easy under the most favorable circumstances, and are extremely difficult in the tortured and enfeebled subjects of tuberculous disease. Thyrotomy for better access is not likely to be successful, for the chances are that infection of the wound will prevent healing, and lead to a more rapidly fatal issue. It would be an exceptional, almost unimaginable case, that would justify laryngectomy.

Krause, of Berlin, encouraged by the success of von Mosetig-Moorhof in the use of lactic acid in the treatment of epitheliomata, employed that agent to destroy laryngeal tissues infiltrated with tubercle, and the reports of his good results have encouraged specialists throughout the world to resort to the same procedure.

The larynx being thoroughly cocaineized, ulcerated parts are curetted and harshly rubbed with a sponge or cotton wad, saturated with a solution of lactic acid. The strength of the solution varies from thirty to forty per cent. at first, to from fifty to eighty per cent. finally, according to the severity of the reaction. Chromic acid, the electric cautery, and superficial electrolysis, according to Voltolini's bipolar method, have also been resorted to.

Krause has likewise vigorously applied lactic acid without preliminary curetting, to reduce the infiltration of non-

ulcerated structures, and he claims excellent results; a claim which has been confirmed by other good observers.

In a communication to the Berlin Congress upon the curability of laryngeal tuberculosis by surgical treatment, Luc (*Archives de Laryngologie*, August, 1890) reviews the various procedures instituted with this object. Many specialists, he says, have not succeeded in obtaining results as brilliant as those reported by Krause, Hering, and others from curettage and lactic acid, and have, therefore, despairingly fallen back upon purely palliative measures. To illustrate the possibilities of success in radical treatment of accessible lesions, he reports the case of a man, thirty-five years old, affected with tuberculosis of the naso-pharyngeal mucous membrane, in whom Krause's local treatment, combined with superalimentation and other appropriate general measures produced a perfect cure. He also reports a case of limited laryngeal tuberculosis, in which energetic curetting and lactic acid applications had apparently brought about recovery. The patient, however, returned some two months later, after a sojourn in the country, much improved in general health, but with a new local lesion. This latter case, he believes, emphasizes the importance of continuous local treatment; the combination of proper topical applications, with the most approved measures to promote general nutrition, being absolutely necessary in every case.

From a large number of observations the author concludes that the method of Krause is capable of producing good results in well-selected cases; but he deprecates its indiscriminate employment. On account of the pain and distress to which the patient is put, he considers that it is the part of humanity not to resort to this expedient when the condition of the lungs or other organs is such as to render the case absolutely hopeless, or when the laryngeal lesions are so situated that thorough treatment is not possible. On the whole, this is sound advice; though, in certain cases, even with advanced pulmonary lesions, it may be advisable to perform tracheotomy, and then actively curette, and apply lactic acid to the larynx, in the endeavor to avert the difficulty of nutrition, which arises in late stages from the exquisite pain in swallowing, due to the passage of food over ulcerated surfaces. The truth is, that in no disease is more discretion required of the physician in applying general rules to individual cases.—*Phil. Med. News.*

The Education of the Senses in Medicine.

It would be a wise measure if medical students had, as a part of their curriculum, systematic courses in the training of the special senses. Some people are born quick and observant, with keen eyes and ready hands; but these are in the minority. Yet every one can easily train his senses to better work, and it is of vast importance to physicians that this should be done. The eye, the sense of touch, and the muscular or co-ordinating sense especially need training. The student, after glancing over a patient, should be able at once to enumerate every point in physiognomy and physical structure. Trained newspaper reporters will enter a room, and after a minute's inspection can write down all the details of its arrangements. The physician's eye should make a similar report of the body of his patient.

The color of the face, skin, the eyes, the lips, the expression, the posture, the movements, the voice, the breathing, the condition of nutrition, should be taken in at a glance. Practice compels all physicians, if successful, continually to learn to do this, but training for it can not be begun too early. The sense of touch and pressure needs especially to be cultivated. For this purpose the physician should pay attention to the care of his hands. They should be kept clean, soft, pliable, and should be much protected by gloves. The rough and dirty finger can never be a delicate organ of touch. The *tactus eruditus* can only come after long experience, but less experience will be needed if proper systematic direction is given to the effort. The pulse is an excellent thing upon which to practice. Some surgeons cultivate the use of certain fingers for certain purposes.

Thus Dr. Hachenberg (*Cincinnati Medical News*) recommends:

1. The touch with the tip and inner surface of the end of the right index-finger for the examination of hidden parts, as the os tincæ, rectum, throat, bottom of wounds, etc.
2. The inner surface of the ends of the index and middle fingers of the left hand for the examination of external parts of the body—for fluctuations of various kinds, oedema pulsations, to determine the character of early cutaneous eruptions, as in small-pox, etc.

The need of a highly cultivated sense of touch and pressure is very great in external examination of the abdominal

walls, and in surgical, obstetrical, and gynecological practice. Dr. Tait says, in his work on "Methods of Diagnosis:"

"It is perfectly impossible for me to convey, by any kind of description, how I can tell by the touch an inflamed vaginal mucous surface from one that is healthy; neither can I describe the feeling that the everted surface of the cervix gives to me which declares the condition of chronic endometritis. But I know that my educated finger-tips can make this distinction. If, on the other hand, I discover a pelvic tumor, long practice enables me to tell with almost perfect certainty, and without the use of the sound, that it is a retroverted fundus or adherent tube or ovary, or by its fading away toward the broad ligament, on one aspect of the uterus or another, that it is an intraperitoneal hæmatocoele; while the peculiar resistance of a myoma conveys to my mind an accurate impression which needs no probing the uterus to substantiate. So a cyst reveals itself in a way I can not communicate. . . .

"Pregnancy, the rock ahead to inexperienced practitioners, can be infallibly revealed by palpation. First of all, there is fluctuation, due to the liquor amnii, and it can be easily detected, and this declares the cystic nature of the mass. If the hand be made to lie gently on the parietes for a few minutes, a rhythmical contraction of the uterus, by which at one time it is hard as a cricket-ball, and at another soft as a cushion, will become perfectly apparent, and this is an infinitely more certain sign than the foetal head, or the sound of the placental bruit."

The education of the ear is also imperatively required by the physician. Every one remembers how hard it was at first to hear a cardiac murmur, and distinguish the different râles. The intonations of the voice, and even the fall of the foot, are things full of meaning to the physician.

The olfactory sense is perhaps least of all used in diagnosis, though it is the quickest of all the senses to detect unsanitary conditions, whether external to the body or internal. The nose insists on pure air and cleanliness, and thereby this modest organ has no doubt saved countless lives. The olfactory organs are the most delicate of all the special senses, and perhaps olfaction may in time be more systematically used in the doctor's search after the pathological.—*Medical Record.*

The Treatment of Dysentery.

I TAKE as my text a statement made by James A. Whitaker, M.D., in his article on "Dysentery," in Vol. II. of Dr. Pepper's "System of Medicine," that irrigation of the large intestine and the thorough flushing out of its contents are now admitted as the most valuable methods of treatment.

The object of writing this paper is to give practical endorsement to that statement. I have come to the conclusion, after frequent discussion of the subject, and from personal observation, that this method is not in such general use as one would suppose from such unequivocal testimony as the doctor brings forward. I desire to record my success with it after repeated trial, and trust that those who have made use of it will add their testimony to that already recorded, and that it may prove to all, as it has to me, a remedy to be relied on as sure and prompt in a disease, which formerly, in my experience, has won the reputation of rheumatism, in its odium and intractability.

To be of use, the enemata must be large and frequently repeated. In some cases I have used them at first every two hours, increasing the interval with the improvement; in others, every four hours. As to the quantity, that must be measured, to some extent, by the tolerance of the patient. I find that it is well for the physician to demonstrate this. People, as a rule, have a mistaken idea as to the capacity of the large intestine. If verbal directions simply are given, at the next visit it will be found that a few ounces are announced as a result of the trial. The measure of the capacity seems to be based on that of the external aperture, and the idea of danger is coupled with the introduction of more than a pint; a point well taken in chronic dysentery perhaps, where, no doubt, it would be dangerous to distend the walls of the intestine, weakened as they are liable to be by deep ulceration. But if the case be seen in the early stages, the quantity safely used will be measured by pints instead of ounces. The capacity of the large intestine, as a rule, is about six pints. Three or four pints will suffice in this treatment.

As to the temperature of the water, moderate warmth, as recommended by Dr. Roberts Bartholow, from 100° to 105°, I find most acceptable, except possibly in the first or second administration, when quite low temperature appears

of benefit. I see to it that the water employed is distilled, when that can be obtained; otherwise boiled.

As to the instrument used, the common Alpha syringe, manufactured by Parker, Stearns & Sutton, serves good purpose. The fountain syringe needs to be used with care. People little know of the great hydrostatic pressure it brings to bear. The hand on the syringe-bulb is a better guide. The position of the patient on the right side, with the back to the nurse, is the most convenient. The introduction of the first few ounces is met by the patient with loud protests; these decrease with assurances of safety and benefit. I have never used medicinal substances in the water, except in one case, where alum proved of benefit. In chronic cases I have never pushed the treatment. I imagine that very few chronic cases will exist if the cases are treated locally from the beginning. So much for local treatment. I used it from the first and persist in it. Its annoyance decreases with the repetition.

Now as to general treatment: I confine my patients to bed. I deprive them of food as much as possible, whisky (well diluted) in small quantities being allowed; this is food, is supportive, and allows the lower canal much needed rest. Milk I do not use unless peptonized, and then only in very small quantities. Prepare it as you may; the excrement will be large if the quantity taken is. I rarely allow more than a quart in twenty-four hours. If the patient will rest without food for forty-eight hours, I find it to great advantage. The fast, as a rule, is not a difficult one, the appetite being in abeyance. The liquid preparations of beef I do not use in intestinal involvement; with their concentrated salts they act as an irritant; they distress more than they benefit. Eggs, scraped beef, or, when these are objected to, the steak, roast and chop with bread make up the dietary.

Certain medicinal measures by the mouth are of advantage. I administer a cathartic at the commencement of the case. If there be nausea, calomel in small and frequently repeated doses is the drug chosen, otherwise magnesium sulphate. Salol is then ordered, and opium in some form if the pain demand. The former drug I esteem. I have used with advantage also naphthalin and hydrarg-corrosiv. chlorid.

As I said before, this treatment has given entire satisfaction in cases severe and mild. Let me relate one of the severest. During the past summer was the time of its occurrence. Its onset presented symptoms of such gravity

as to excite just apprehension. The patient was a delicate lady. I was called to her in the night shortly after the attack began. She was in the fourth month of pregnancy. Temperature 105° ; pain intense; vomiting; pulse very rapid; passages small and frequent, composed of blood and mucus. I announced the treatment, and was requested to see to the case personally until improvement should be marked. The patient retained two quarts of water by the second enema. Distilled water was used in this case. She was convalescent in four days and well in a week. No food was allowed for three days; she received whisky alone. I was on hand to see the case. Much of the first three days was spent in watching the patient. Calomel in one-twentieth grain doses quieted the stomach; morphia sulphate, by hypodermic method, the pain. Salol, in five-grain doses, was given after the third day, when food was resumed. The condition of pregnancy caused additional alarm here. A number of cases I might record with similar good success. They would simply tire you and occupy valuable time unnecessarily. During the past month three fulminating cases came under my observation, and the record of success was the same with them.

To sum up: The treatment is simply the application of the antiseptic method—the rational and scientific treatment of a disease which exhibits itself mainly as an inflammation of the large intestine. There the havoc is wrought, much of the constitutional disturbance, I believe, being due to the absorption of septic products in that quarter which result from the inflammatory process. The enforcement of cleanliness removes these, removes all irritants, reduces congestion—in fact, fulfills all the indications, and most of all proves practically what it presents to our minds theoretically.

A review of my past experience shows difficulty and discomfort with the ipecac treatment—in some cases alarming exhaustion.

Opium, notwithstanding the praises Dr. Austin Flint, Sen., has expressed as to its efficacy in this disease, I reserve as an adjunct, simply to quiet and relieve my patient. It has deceived me into the belief of convalescence when the case was progressing under it as a mask. Turpentine for a time may do good. It militates against the welfare of the stomach and the kidney, and is very apt to be cast into the waste-pipe by the patient soon after the physician's de-

parture. Occasionally I have had a measure of success with it.

Of the use of suppositories I would say that in this form I have employed iodoform with more advantage than any other drug. Its field of application appears narrow.

It may be asked if I used the irrigation-treatment in the case of infants. My answer is that my success with it in their case is as marked as in that of adults; in fact, I employ it to some extent in all their bowel disorders. A few ounces suffice with them, and do not require very frequent repetition. The characteristic of medicinal measures employed by me in their diseases is simplicity almost to a fault. I will say, in addition, that in this disease, as in most of the acute troubles occurring in the digestive tract during the first year or so, the withdrawal of food for a time, or its diminution to a minimum, has proved of the greatest advantage. As to the diet in bottle-fed infants in sickness and in health, sterilized cows' milk with the cereals, rice, barley and wheat, have given better results, in my experience, than any of the "infants' foods" so largely manufactured at this present time. In addition to this, as a prophylactic measure, the protection of the surface of the body with woolen garments, light in texture, from one year's end to another, is a *sine qua non* in this climate, marked by such wide variations of temperature, from which not even the summer months are exempt.—H. A. Fairbairn, M.D., in *Brooklyn Med. Journal*.

Micr^oscopy.

The San Francisco Microscopical Society.

THE GENESIS OF CHROMATOPHORES, OR COLOR CELLS, IN FISHES.

Reported for the CINCINNATI MEDICAL NEWS, by W. E. Loy, Esq., Secretary.

THE regular fortnightly meeting of the San Francisco Microscopical Society was held at their rooms recently. Vice-President Bates presided.

The paper of the evening was by Carl H. Eigenmann, Ph.D., on "The Genesis of Chromatophores in Fishes." Mr. Eigenmann has made a special study of the life of fishes, and his paper bore the stamp of original investigation.

By way of introduction he mentioned how the color of fishes varied under different conditions; the color of the food would modify it, or the color of the bottom of the sea where the individual made its habitat would change it. The same species, under these varying conditions, would show a marked difference of color in the tide pools separated but a few feet. In this latitude most fishes frequenting our shores and coming near the surface are a dove color. The species found at a depth of two hundred fathoms or more are plain black or plain white. Farther south they assumed a brighter hue. Professor Alexander Agassiz obtained different colors in the same fish by changing its surroundings, or by placing it over sand of different colors.

In order to fully explain the formation of the chromatophores or color cells, the speaker gave a brief outline of the development of the fish, its embryology. A number of carefully made drawings supplemented various preparations shown under the microscope, and the various stages of the embryo were drawn on the blackboard. The pelagic ova, being lighter than the sea water, float to the surface and there pass rapidly through the various stages in the embryonic state. Most of the observations noted were made in the vicinity of San Diego, and were confined to the ova obtainable in or near the harbor, as he had nothing but a row-boat in which to make his excursions, and it was not possible to go long distances, gather and convey them to his laboratory and note the rapid changes.

Ryder first calls attention to the origin of color. At fourteen hours, he says, the embryo begins to show signs of the development of the pigment just below the superficial layers of the epiblast. These cells are at first scattered irregularly over the body of the embryo, and gradually grow darker. As they do this they also become irregular in form and flattened, with a number of points running out from them. Later they tend to aggregate on certain parts of the body. The rearrangement appears to be accomplished by their migration toward definite points, by means of an amæboid movement of their entire substance. By the time the young fish is ready to hatch, the covering of the oil sphere is found to be more or less covered with pigment, which seems to have in part developed in the cellular mantle.

Agassiz and Whitman give a more satisfactory account in describing the early stages of *Cottus grønlandicus* and *Motella argentea*. Of the first they say the pigment is at

first extremely pale, and confined to a few mesoblastic cells along each side of the embryo. In the course of an hour the number of young pigment cells is much increased, and a few black pigment dots make their appearance. By this time some of the pigment cells of both colors have wandered away from the lateral mesoblastic masses of the embryo, and appear as isolated amæboid cells, between the ectoderm and the layer which we have called the periblast. In *Motella*, pigment cells first appear near the closing of the blastopore, and they are developed along the sides of the embryo from the blastopore forward.

Pigment is nearly always found some time before hatching, and as the embryonic life is usually short, lasting from eighteen to forty-eight hours, and the eggs are transparent, the whole process, from fertilization to hatching, can be observed without any very great inconvenience. The observations recorded were all made on the living egg, which was usually placed under a cover-glass, which was supported either by wax feet or paraffine rings.

After reading the paper the Chairman invited questions and remarks, and further facts and explanations of phenomena pertaining to the subject under discussion were elicited.

Mr. Riedy exhibited a wide-angled condenser in a new mounting. This mounting has an iris diaphragm, opened and closed by a lever, completely controlling the light, and a rack and pinion decentering attachment. The dark-field stops and the blue glass are quickly changed, the supporting ring swinging aside for that purpose. The convenience of manipulation and its very neat appearance were admired by all.

EXAMINATION OF HUMAN MILK.—Dr. J. Lewis Smith's work on Diseases of Infancy and Childhood has reached the seventh edition, which has just been issued. On page 60 are stated the microscopic characteristics of normal human milk. We quote as follows:

"Examination of the milk by the microscope not only enables us to determine whether there are abnormal corpuscles or granular elements, but also its richness. It should be examined before the cream has separated. Oil globules of small size and few indicate poverty of the milk. Very large oil globules are said to indicate milk which is apt to be indigestible, especially in feeble infants. Such are the

free globules of the colostrum. Numerous oil globules of medium size indicate nutritious milk. In examining the milk by the microscope or otherwise in order to determine its richness, the important fact should be borne in mind that milk removed from the breast at short intervals is richer or more concentrated than that removed at long intervals. A larger percentage of water is present if the interval be four hours than if it be two hours. Another important fact which should be borne in mind in testing the milk is that that first drawn from the breast is more watery, or not so rich, as that last drawn or the stripping.

"The fact has been established that vibriones may exist in human milk. These animalcules may be generated in the milk within the breast, though such cases are not frequent. Dr. Gibb describes a case: An infant seven weeks old, wet-nursed by its mother, who had the appearance of perfect health, was, nevertheless, ill-nourished and emaciated. It had no diarrhea or other apparent disease, and the milk was, therefore, examined. Vibriones were discovered in the milk immediately after it was obtained from the breast. The milk had the usual amount of cream, and seemed to the naked eye of good quality. According to Dr. Gibb, two genera of microscopic organisms occur in the milk—namely, vibriones and monads. It is believed that the monads occur in consequence of the fermentation of the sugar and the production of lactic acid. Vogel also attributes the production of the vibriones to fermentation occurring in consequence of heat and congestion of the breast connected with sexual excitement. This explanation is probably not correct, because vibriones sometimes occur when there is no unusual heat of breast and no evidence of fermentation. The fact that such organisms may be found in milk which seems of good quality to the naked eye, affords additional proof of the usefulness of the microscope in selection of a wet-nurse."

Gleanings.

LISTER'S METHOD DISCARDED BY LISTER!—"Who could have foreseen the short existence of the world renowned system of Lister, which has been for years the ideal of modern surgeons? Who could have dreamed that the idol would be one day broken by him who had placed it on a

pedestal of bronze and polished brass?" Such are the questions with which the *Journal d'Hygiène* begins the announcement of the present status of Listerism, and goes on to remark: "It is, however, an historical fact. The dictum of Lister and his antiseptic doctrine have ceased to exist. In his remarkable communication to the Congress at Berlin, on the actual condition of the antiseptic treatment of wounds, the eminent English surgeon has given the following judgment:

"As regards the spray, I feel ashamed that I should have ever recommended it for the purpose of destroying the microbes of the air. If we watch the formation of the spray, and observe how its narrow initial cone expands as it advances, with fresh portions of air continually drawn into its vortex, we see that many of the microbes in it, having only just come under its influence, can not possibly have been deprived of their vitality. Yet there was a time when I assumed that such was the case; and trusting the spray implicitly, as an atmosphere free from living organisms, omitted various precautions which I had before supposed to be essential."

"Lawson Tait, of Birmingham, Bantock, of London, and Bergmann, of Berlin, in reviewing their vast experience, are not afraid to affirm that antiseptic treatment must now yield the place to the aseptic method!"

"Water, boiled or sterilized, a brush and soap are the simple means which have enabled these eminent surgeons to perform a series of one hundred ovariotomies without a single death."

Cincinnati 6/19/91

THE GRIPPE, FROM A SURGICAL POINT OF VIEW, has been the subject of a communication from M. Verneuil. The following, from *Gazette Hebdomadaire*, gives the points of interest: Wounds of every kind, he says, suppurate during the prevalence of epidemics of grippe, and surgical operations are attended with bad success, notwithstanding all the care to apply such antiseptic measures as are most energetic.

The complications of *influenza* were very numerous during the last winter. We have all treated conjunctivitis, otitis, parotitis, pleurisies, pericarditis, peritonitis, purulent arthritis, and orchitis. We have met with cases of spontaneous phlebitis, arteritis, and lymphangitis.

These surgical complications were numerous both during

the attack of the grippe and during the period of convalescence from the disease.

The grippe has accelerated the course of certain tumors, and seems also to have had an unfavorable influence on pregnancy and its succedanea.

M. Germain Séé thinks that there exists, at present, in Paris, a form of grippe which takes on the form of pultaceous anginas, with false membrane, which contain, not the microbes of Klebs, but the sterptococcus variety.

WHOOPING COUGH has often been taken to be one of the diseases in which treatment is of no value; particularly is this so among the laity, but this is certainly a great error. I have found the local use of the peroxide of hydrogen of benefit.

In addition I have very materially reduced the paroxysms by the administration of from two and one-half to five grains of phenacetine two or three times a day, and oftener at night if required.

I generally administer the phenacetine in the following formula:

Phenacetine forty grains.

Alcohol two drams.

Glycerine two drams.

Fairchild Bros. & Foster's essence of pepsine, three and a half ounces.

Mix.

Sig. One or two teaspoonfuls three or four times a day, as indicated.

The phenacetine unquestionably diminishes the frequency of the paroxysms. I believe that the peroxide of hydrogen acts directly when applied locally, upon the germs which are the exciting cause of the disease.—*Med. Mirror.*

RACHITIS.—Kassowitz recommends phosphorus, and gives the two following formulæ:

1. Rx	Phosphori.,	gr. 3-20
	Pulv. acaciæ	
	Sacchari alb.,	āā 5ss
	Ol. amygdal. dulc., . . .	f5viiss.
	Aquæ destillat.,	f5x. Ft. Emuls.

S. Teaspoonful once or twice daily.

2. Rx	Phosphori.,	gr. 3-20.
	Ol. morrhæ,	f5iii. M.

S. Teaspoonful once or twice daily.—*Mandelstamm. Jahrb. f. Kinderheilk.*, 1890. Bd. xxx, Hft. 4.

For Fissure of the Nipples, the following application is recommended (*Amer. Pract. and News*) :—

R. Salol,	. . . . .	3j
Ætheris,	. . . . .	3j
Cocain, hydrochlorate,	. . . . .	gr. ij
Collodi,	. . . . .	3v. M.

For tender feet, *The Dixie Doctor* recommends a mixture of two quarts of cold water, two tablespoonfuls of ammonia, one tablespoonful of bay rum. Sit with the feet immersed for ten minutes, gently throwing the water over the limbs upward to the knee. Then rub dry with a crash towel, and all the tired feeling is gone. This is good for a sponge-bath also.

THE BORATE OF SODA, IN THE TREATMENT OF EPILEPSY, was first proposed by Charles F. Folsom, of Boston, in 1881. Gowers reported four cases treated with the remedy, three of which were entirely cured.

Lately, *El Siglo Medico* reports, Señor Dijond has tried the remedy in twenty-five old cases in which the *bromides* had been employed without any real benefit. The duration of the treatment with the borate of soda was from four to seven months; the doses of the remedy varied from one to six grammes a day.

One case was completely cured, and all the others, except six, were much improved.

ADMINISTRATION OF MORPHINE BY THE NOSTRILS.—Dr. Carl H. von Klein, of Dayton, O., read a paper on this subject. He said, in the administration of morphine by the mouth there is generally, besides an unprecipitate taste, a great deal of hacking and spitting, in many instances to such an extent that it produces an irritation of the throat, especially of the soft palate. In persons not accustomed to its use it produces nausea and vomiting. Billroth reports the case of a lady—who took one-ninth grain, in which he saw such anxiety, nausea and vomiting, that, although suffering intense pain, the patient refused to take the remedy again. Dr. von Klein has administered morphine through the mucous membrane of the nose in over one hundred cases, with very satisfactory results. The manner of administering morphine through the olfactory canal is simply by snuffing it up the nasal chambers in the same

manner as snuff tobacco is used. The dose is divided into two equal parts, each part being placed upon the end of the thumb and snuffed up into the nostrils. He has found this mode of administering it the most reliable, as it is tasteless, and the drug is more prompt in its action than when administered either by the mouth or hypodermically.

INFANTILE URTICARIA.—At bedtime the following pomade is to be employed.

R	Chloral,	.	.	.	.	.	.
	Camphoræ pulv.,	.	.	.	.	.	.
	Acaciæ, pulv.,	.	.	.	.	āā	3i.

M. Triturate until liquefied, and then add cerate simp. 3j.

This relieves the pruritus, permits the infant to sleep, and puts a stop to scratching.

In the morning anoint with :

R	Acid. carbolic,	.	.	.	gr. viiss.	
	Amyli glycerol,	.	.	.	3i.	M.

Linen must be worn next to the skin.—*Dixie Doctor*, August, 1890.

EXPECTORANT.

R	Apomorphin. muriat,	.	.	gr. $\frac{1}{3}$ -gr. $\frac{2}{3}$.	
	Acid muriat.,	.	.	gtt. iii.	
	Aquæ,	.	.	f3jiss.	M.

S. Teaspoonful every hour or two. Keep in a dark glass. *Kinder-Arzt*, April, 1880.

WHOOPING COUGH.—Rothe speaks highly of the following combination :

R	Acid. carbolic,	.	.	.	āā gr. xv.	
	Alcohol,	.	.	.		
	Tr. iodin.,	.	.	.	gtt. x.	
	Tr. belladon.,	.	.	.	gr. xxx.	
	Aq. menth. piperit,	.	.	.	f3iss.	
	Syrup opiat.,	.	.	.	f3ii.	M.

S. A teaspoonful every hour to a child of one year.

Book Notices

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION.

Twenty-second Annual Session. Held at Fort Worth, Texas, April 22, 23, 24 and 25, 1890. 8vo. Pp. 343. Cloth. Austin, Texas.

The State Medical Association was organized twenty-one years ago at Houston. From the account given of it, it has done good work—being in no respect behind other State medical societies.

A number of valuable and interesting papers were read. Among them we notice a Report upon Surgery by the Chairman of the Section on Surgery, Dr. W. L. York, Decatur; "Report of Five Cases of Cranial Surgery," by Dr. H. L. Fountain, Bryon; "Hemorrhoids," by D. F. Brittain, Jacksonville; "Comminuted Fracture of Leg—Gangrene—Amputation—Recovery," by W. M. Powell, Albany; "Carcinomatous Breast Removed—No Return of Disease," by B. F. Brittain, Jacksonville; "An Explanation of the Phenomena of Immunity and Contagion, Based upon the Action of Physical and Biological Laws," by Dr. J. W. McLaughlin, Austin; "Address in Medicine," by Dr. D. M. Ray; "Observations on the Utility of Constitutional Treatment in the Chronic Diseases Peculiar to Women," by Dr. Thos. More Madden, Dublin, Ireland; "Cerebro-Spinal Meningitis," by Dr. J. D. Burch, Aurora; "Our Troubles as a Profession—Their Cause and Cure," by Dr. C. M. Ramsdell, Lampasas, etc.

There were a number of other papers read besides those whose titles we have given. All the papers give evidence that their authors had well studied their subjects.

THE BIOGRAPHY OF EPHRAIM McDOWELL, M.D., "THE FATHER OF OVARIOTOMY." By his granddaughter, Mary Young Ridenbaugh. Together with Scientific Treatises and Articles relating to Ovariotomy, and Eulogistic Letters from Eminent Members of the Medical Profession in Europe and America. 8vo. Half Morocco. Pp. 558. New York: Charles L. Webster & Co. Price, \$4.

Several months ago we announced to the readers of the MEDICAL News that Mrs. Mary Young Ridenbaugh, a granddaughter, was preparing and would soon publish a biography of the very distinguished and illustrious physician, Dr. Ephraim McDowell, who originated the operation, now known and performed throughout the civilized world, by which tens of thousands of women have had their lives saved—the operation of OVARIOTOMY. It now affords us pleasure to state to our readers that the work has appeared;

and it has appeared in a form that gives it a most handsome appearance. The binding is beautiful, exhibiting the highest mechanical skill in its line; the paper is the finest made; and the type is clear, distinct, and easily read, double leads having been used.

As a biographical history the work is exceedingly interesting. We do not say this for the purpose merely of lauding it. The statement is true. Dr. McDowell was one of the pioneers of Kentucky, and as a pioneer he had a varied experience which almost necessarily befalls one settling in a new, uncultivated country, among crude and uncouth people in manners, but intelligent, and possessing sharpened wits. But in the days of Dr. McDowell, there were not a few men in Kentucky of renown, whose names have become engraven in the history of the State, with whom he was acquainted and with whom he was on terms of intimacy. In association, therefore, daily, in consequence of the profession he pursued, with those who took part in clearing away the forests, after having succeeded in driving from the country the aborigines in the long and dangerous Indian warfares, and in association with the sturdy politicians of the Blue Grass regions, with the Calvinistic divines of the early days of Kentucky, could be otherwise than that a well-written life of him would be interesting.

But this biography of Dr. McDowell by his granddaughter is not interesting only in the way of personal adventure, and by affording insights in the private lives of eminent men of the early part of the present century, but it is interesting to a high degree in consequence of the large amount of scientific information it contains, especially as regards ovarian tumors and ovariotomy. These subjects are very thoroughly discussed by quotations from the works, lectures and letters of the most eminent surgeons of the present day and those of over a half century ago. Who is the physician, however humble he may be, that is not interested in the history of the operation of ovariotomy? Every fact in regard to it is valuable, and is worth treasuring in the memory. Such, then, being the fact, we will assert without apprehension that the statement will be disproved that there is no work extant that contains so much information as does this Biography of Ephraim McDowell, M.D.

We copy the following from page 197, from a sketch of Dr. McDowell by Dr. John D. Jackson, of Danville, Ky.:

"Dr. Peaslee has made a calculation based on the known

law of the length of life of a woman who has an ovarian tumor uninterfered with, and the average of all the recorded cases of ovariotomy up to 1870, and the probabilities of longevity of healthy women of that age according to the most tables of life insurance, and has shown that in the 'United States and Great Britain ovariotomy has within the last thirty years directly contributed more than thirty thousand years of active life to woman, all of which would have been lost, had ovariotomy never been performed'—to say nothing of saving her more than a thousand years of untold suffering.

"With these facts before us, most devoutly indeed should all women bless the name of Ephraim McDowell.

"Before the nineteenth century, not one of the most astute or boldest of the healing profession could promise anything hopeful to women afflicted with ovarian dropsy. The doctor, when called to such a case, could only say: 'Two years of life, filled with gradually increasing misery, is the full compass of the days allotted to a woman who may find that she has an ovarian tumor; and unless God works a miracle in your case, this is your fate.'"

OINTMENTS AND OLEATES ESPECIALLY IN DISEASES OF THE SKIN. By John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. Second Edition. Revised and Enlarged. 12mo. Pp. 298. Cloth. Philadelphia: F. A. Davis. Cincinnati: Alfred Warren. Price, \$1.50.

This is a work upon a subject to which, we must confess, we have not given much attention, and, consequently, rather poorly qualified to pass upon its merits. It seems that the author, for quite a number of years, has been interested in the production of the different oleates and their introduction to the medical profession as useful remedies for the treatment of diseases of the skin, etc. He has endeavored by investigation and experiment to test their value, and it affords him pleasure to announce that his efforts have proved successful, as evinced both in his hospital and private practice, and in the adoption of the oleates by practitioners in this country and in Europe.

For many hundred years, for aught we know, animal and vegetable fats—oils, greases, etc.—as lard, tallow, olive oil, beeswax, resins, etc., have been employed in medicine as

vehicles for the external application of remedies—the combinations being called ointments and salves. But beyond our knowledge of fats (oleates) as vehicles our information did not extend. Dr. Shoemaker, however, treats of adeps (lard), lanolin, cacao butter, spermaceti, and others. These fats, he asserts, penetrate into the skin, their absorption being favored by prior immersion of the part in warm water and by friction.

After the consideration of the various fatty bodies employed as bases for unguents, he discusses the subject of ointments prepared by combining these bases and different medicines, as mercurial ointment, lead or diachylon ointment, iodine ointment, etc. He gives a great many formulæ, many of which, no doubt, are valuable. For instance, he gives a formulary for *carbonate of lead ointment*, as follows:

Take of Powdered arrow-root, . . . 1 drachm.
Oil of chamomile, . . . 6 drops.
Sulphate of morphine, . . . 3 grains.
Carbonate of lead ointment, 1 ounce.

Mix. He pronounces this ointment as a very beneficial topical remedy in erysipelas, acute eczema, erythema, burns and scalds.

Another formulary, which we will give in prescription form, is as follows:

R. Pulv. Potass. Chlor., . . . ʒss.
Morph. Sulph., grs. iv.
Atropiae Sulph., grs. ij.
Unguent. Ergotæ, ʒj.
Mix.

He states that this is an excellent remedy to apply to the scalp in alopecia. It softens and smooths the hair and promotes the nutrition of the hair bulb. It is beneficial also in cases of epithelioma, chronic ulcers, etc.

An ointment of ergot can be made by incorporating finely powdered fresh ergot with a fatty basis in the proportion of one part of the former to eight or ten of the latter.

There are several hundred formulæ in the work.

MEDICAL DIAGNOSIS WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE. A Guide to the Knowledge and Discrimination of Diseases. By J. M. Da Costa, M.D., LL.D., Professor of Practice of Medicine and of Clinical Medicine at the Jefferson Medical College, Philadelphia; Physician to the Pennsylvania Hospital, etc. Illus-

trated with Engravings on Wood. Seventh Edition, Revised. 8vo. Pp. 995. Cloth. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. Price, \$6.00.

Da Costa's Medical Diagnosis is a standard work. It is an authority upon the subjects which it treats, as is evidenced by the fact that a seventh edition is called for. It has not only met with the approval of physicians of this country, but it has been received with favor by those of other countries. A second edition of the German translation by Dr. Engel and Dr. Posner has appeared in Berlin; a Russian translation has been published; and a translation into French, by Dr. Laurent, is being made at this time. Certainly a work that can show such endorsement must be one of merit.

The introduction is devoted to general considerations in regard to diagnosis, which the author asserts to be both a science and an art. It is a science because it comprehensively takes account of general facts, and of principles based upon those facts; an art, because it demands a cognizance of the means, and their application to arrive at desired results. In the first chapter symptoms and morbid phenomena of general import are discussed, and some of the instruments employed in diagnosis are described.

In the second chapter diseases of the brain and spinal cord are considered, and the symptoms by which their various affections are recognized are set forth. The discussion of the diagnosis of brain and spinal diseases occupy the pages from the 52d page to 229th page. Among the many morbid symptoms treated by which pathological conditions are manifested are the different paralyses—hemiplegia, paraplegia, monoplegia, etc.—apoplexy, epilepsy, tremors, deranged reflexes. In chapter third the diseases of the air passages and the symptoms observed in their various afflictions are taken up and considered. In the chapters which follow there are treated the diseases of the liver, stomach, blood, fevers, rheumatism, diseases of the skin, poisons and parasites, etc.

It has been the aim of the author to furnish advanced students and young graduates with a guide that might be of service to them in their endeavors to discriminate disease; to afford those who are about to enter upon the practical duties of the profession a book of an essentially practical character—one neither too meager in detail nor so overladen

the surface of the earth, and the law of the perpetuity of life would be compromised by the gradual exhaustion of its materials. One grand phenomenon presides over this vast work, the phenomenon of fermentation."

What is embraced in this quotation is undoubtedly true; but beyond these assertions all are hypotheses as regards Protoplasm and Life.

Huxley and Herbert Spencer seem to be of the opinion that in Protoplasm and Evolution the origin of life has been discovered, yet their nuts are as hard to crack as are the ancient beliefs.

The two essays of Mr. Cox will afford readers an interesting history of Protoplasm, Cells, Amœba, etc.

Editorial.

SELECTION OF A MICROSCOPE.—Dr. H. M. Whelpley, of St. Louis, contributed an article to the Microscopical Department of the October number of the MEDICAL NEWS. The article contained much information valuable to beginners in the study of Microscopy. If we took issue with any of his instructions it would be upon the subject of selecting a microscope. Bausch and Lomb's microscopes have been quite popular, and large numbers of them have been sold to physicians and medical students. Up until within a year or two it is probable that the firm manufactured and sold more instruments in the ten years previous to this time than any other manufacturing establishment in this country. The Becks, of England, used to sell immense numbers of their instruments in this country. Their agent here, for a long time, was Mr. Wm. H. Walmsley, of Philadelphia, but other parties now control the sale of them in the United States. Whether or not they do not push them as actively as Mr. Walmsley, we do not know—we seldom hear now of any one purchasing any of their make. A very popular pattern of the Becks was the Economic. Made entirely of brass, and finely finished, it presented a very beautiful appearance. Its objectives—one inch and a quarter inch—were very good, fulfilling nearly all the requirements of a physician. But they seem now to be out of date.

Fifteen years ago, and even more recently, the German instruments were regarded as very inferior. We remember of seeing one or two of them on exhibition at the Centen-

nial, in Philadelphia, in 1876. They were such inferior looking instruments, exposed to view in their glass cases, that we would not have given them "house room." But within a few years the German manufacturers have taken a front rank. Zeiss' microscopes, especially his objectives, have become famous the world over. Zeiss, under the direction of Prof. Abbe, first made the celebrated homogeneous oil immersion objectives.

We have a recent catalogue and price-list of Zeiss, published by him, in the German language. On page fifteen is an engraving of a microscope that, from its appearance, we would judge no one would wish a better one, the price of which is stated to be one hundred and fifty marks, or about thirty-six dollars. It has a large circular mechanical stage; a draw-tube with a scale marked upon it; rack and pinion for coarse adjustment; fine adjustment, with a scale; double nose-piece; and other features of a convenient character. It inclines to any angle.

On page seventeen are two engravings of microscopes, varying somewhat in appearance. Each of them has a large, square stage — larger than the average size of American or English instruments. They are without rack and pinion for coarse adjustment, but both have a delicate pin adjustment. They stand straight, not having hinges to incline. They are convenient for library use and competent for any work. The price for each is seventy-five marks, or eighteen dollars.

On foreign microscopes an importation duty has to be paid and freight charges across the Atlantic. The latter, however, is small. We do not consider it right to charge duty on educational instruments. It is a restriction upon learning. There is an abundance of manufactured articles used as luxuries by the people for the government to tax in order to secure an income for itself, and to enable manufacturers to become immensely rich, without levying exorbitant duties upon implements of scientific research, and thus compel learning to pay tribute.

While as good microscopes can be made in this country as in Europe, yet the prices asked for American instruments are entirely too high. Competition has so brought down the prices of watches made in this country, that even schoolboys can afford to carry excellent time-keepers. The cases, too, of watches are made of one or the other of the so-called precious metals — one made of silver costing but five or six

dollars. A microscope, however, with the base of its stand made of cast iron and its tube constructed from a thin sheet of brass, costs from twenty-five to fifty dollars.

Fashions change. This statement seems true not only as regards the style of dress, but also as respects the style of scientific instruments. Microscopists no longer, it appears, admire the neat, trim instruments, with their limited stage room, of American and English makers, but prefer the French and German styles. But we are disposed to consider that the discarding, at present, of former popular American and English makes has a more substantial cause than that of merely becoming weary of their styles.

ACCOUCHEMENT UNIQUE.—A letter in a recent number of the *Northwestern Lancet* relates a number of *unique accouchements*. One is of a young unmarried woman on trial for infanticide, in which the issue was largely dependent on her statement—which in his charge to the jury the judge characterized as incredible—that being in a room only separated from adjoining ones by ordinary partitions, she completed her labor and gave birth to her first child without giving any intimation by outcry, groan or otherwise of what was going on to persons in these adjoining rooms.

Another *unique* affair related in the letter, is that of a young unmarried woman. No one suspected that she was pregnant. The family consisted of herself, her father and mother, her sister and her sister's husband and a hired man. She occupied one of two small chambers, the other being the sleeping-room of her sister and husband. The house is small, the partitions slight, and the doors being all open it was much as if it was all one room. The living-room was directly beneath her room. She came down to dinner, but declined at teatime to come down, complaining of headache. The women were at work during the afternoon in the living-room, but heard nothing from her whatever. The family retired about nine o'clock, no one having gone to her room. Soon after, the brother-in-law thought he heard a queer noise in Dolly's room, and sent his wife to investigate, with the result of finding a *six-hours-old lively child*, still attached by the cord to the undelivered placenta.

The editor of the MEDICAL News was told, several years ago, by an old German Jew woman that during the child-bearing period of her life, having become pregnant, like all other respectable married women who are expecting soon to

present their lords with an additional heir, she got everything ready for the accouchement. On a certain evening, when her full time had come, according to her estimate, she felt a few pains on retiring with her husband for the night, but she said nothing to him, as she did not wish to do anything to disturb his rest until her needs required it. Some time between midnight and morning, her pains having increased very much and having assumed a bearing-down character, she arose from the bed without awaking her husband and got out on the floor. Very shortly after getting on the floor she was delivered of both child and after-birth. She then tied the cord and properly severed it. The next room being the kitchen, she found in it a kettle of warm water, which she poured into a vessel and with it washed the baby and washed up some blood stains on the floor. The baby's linen and dress being right at hand, she then proceeded forthwith to dress the new-comer and place it in the bed, and then got in herself and composed herself to sleep. During all this time the husband was snoring away in the bed which was right in the room, totally unconscious of all that was going on. Nor did he know anything of what had transpired until, at the usual time, he wakened and found that his family and his expenses had increased during the night, while locked in the arms of Morpheus. But if this discovery was not gratifying, he assuredly had reason to be gratified by the evidence afforded him of his wife's tender regard for his repose. The old lady pledged us her word that the story we have related is true. We will state that the old lady, when we knew her, while not a practicing midwife, was very well posted in the art of midwifery.

EXECUTIONS IN ENGLAND IN FORMER TIMES.—The prisoners in England (not Great Britain) for debt and crimes in the reign of Henry VIII. (the population was not near so great then as now) are asserted, in an Act of Parliament, to have been over sixty thousand. Harrison asserts that seventy-two thousand criminals were executed during this reign for theft and robbery, or nearly twenty thousand a year. He adds that in the latter end of Elizabeth's reign, there were not punished capitally four hundred in a year. In Hume's time, according to his statement, not more than fifty executions, for all causes, took place in a year. If these facts be correct there has been a great improvement

in morals in England since the reign of Henry VIII. This improvement has been largely due to the increase of industry and of the arts which have given occupation and maintenance to the lower classes.

THE PREVENTION OF TUBERCLE.—We learn from a recent number of the *Lancet*, of London, that a Committee of the Darlington Corporation have resolved to recommend to the Council a periodical inspection of all dairymen's cows within their jurisdiction, with a review to prevent or minimise the spread of tubercular consumption by means of milk from animals suffering from tuberculosis. This decision, says the *Lancet*, must be regarded as the outcome of a recognition, which is daily in the increase, of the risk that attaches to the use of milk from cows suffering from tuberculosis, and of the fact that a very large number of cows are affected by this disease.

There is no disease that slays so many thousands every year as consumption. If the deaths from it among adults do not amount to one-fourth of their whole mortality as is maintained by many, we presume that at least one-tenth of those dying over eighteen years of age have consumption as the cause. If in England the milk of the cow is recognized as a cause of consumption in very many instances, is there not reason to believe that it is oftentimes the cause of the disease in this country, while Dr. Prendergast, the health-officer of Cincinnati, is given much attention to the examinations of the condition of dairies, would not be well if he would frequently have the cows examined for the purpose of ascertaining if any of them were affected with tuberculosis?

KOCH'S DISCOVERY.—Not only members of the medical profession, but members of all other professions and callings, both in this country and Europe, seem to be much excited in regard to the alleged discovery of Prof. Koch, of Berlin, of a method for the destruction of the bacilli of tuberculosis. Many, however, are of the opinion that the bacilli are the result of the condition known as tuberculosis, and not the cause. But it is now agreed upon by all pathologists that the presence of bacilli in the expectoration or any of the excreta coming from the bronchial tubes is pathognomonic of phthisis pulmonalis—tuberculosis of the lungs. Both those who maintain that bacilli are the cause

of tuberculosis and those who maintain that they are the result of the condition assent to this proposition.

Within a very short time it has been announced to the medical world that Prof. Koch believes that he has discovered a method to destroy the bacilli of tuberculosis whereby the dread disease, known among laymen as consumption, can be cured. The proposition, we believe, is that so soon as the bacilli of tuberculosis are found to be present in the sputa of an individual, establishing the fact that he is the subject of phthisis pulmonalis, on the application of Koch's remedy, the bacilli, causing the deposit of the tubercular matter, will be destroyed; and, consequently, there will be no further deposit of it. It will then follow that the tuberculous material which had already formed will either be encapsuled and rendered innocuous, as happens oftentimes with foreign substances that have found entrance in the tissues, or will find its way into the bronchial tubes by ulcerative processes and be expectorated, the loss of continuity in structure which resulted, healing and cicatrizing.

In the way of showing the great interest that has been excited by the statement of Prof. Koch that he has discovered a method by which tubercular bacilli can be destroyed and the patient saved from that most fatal disease, consumption, we will quote a few lines from a cablegram just received from Berlin: "The publication of Koch's statement has intensified the excitement both here and abroad, and from every center of Europe and America telegrams of inquiry are pouring in on Koch, Cornel, Bergmann and the other medical men who are known to be engaged in treating patients by the new method. Koch's clinique in Albrecht's strasse, the Imperial Sanitary Institute, where Cornel and other Kochists are at work, are swamped with letters and personal applications."

It is stated that Prof. Nothnagel, of Vienna, in addressing his class upon the discovery of Koch, spoke as follows: "We face one of the greatest intellectual achievements in the province of medicine for centuries past. Prof. Koch's discovery has a far wider scope than Jenner's, and is perhaps the grandest feat in the history of our science. What inspires me with admiration is not so much the actual discovery as the method of bacteriological research, which must serve as the basis of all future discoveries in that line. The present moment is among the most sublime that humanity has known."

It is stated that the students shared the fervor of Prof. Nothnagel, and cheered him to the echo.

At the meeting of the *International Medical Congress* a few weeks ago at Berlin, Prof. Koch excited much curiosity by detailing his experiments to discover a substance which, when injected into the body, should have the effect of destroying the bacillus of tubercle without injuring the animal operated upon. He stated that he had found various substances to be remedies which hinder the growth of tubercle bacilli in tube cultures: a number of ethereal oils—among the aromatic compounds, β -naphthylamin, paratoluidin, xylyden; some of the so-called tar dyes—namely, fuchsin, gentian violet, methyl blue, clinolin yellow, aniline yellow, auramin; among the metals, mercury in the form of vapor, silver and gold compounds. The compounds of cyanogen and gold were especially conspicuous, their effects surpassing that of all other substances; even in a dilution of one or two millions they had checked the growth of tubercle bacilli. But all these substances, though effective in tube cultures, were absolutely without effect if tried on tuberculous animals. But Dr. Koch, says the *Lancet*, of London, of November 1st, from which we have obtained our information in regard to his reports to the International Medical Congress, was too far successful to be discouraged, and he thinks he has hit on a substance which has the power of preventing the growth of tubercle bacillus, not only in a test tube, but in the body of an animal. Even guinea-pigs, which are extraordinarily susceptible to tuberculosis, if exposed to this substance cease to react to the inoculation of the tuberculous virus; and still more, guinea-pigs actually suffering from general tuberculosis, even to a high degree, have the morbid process arrested without the body being in any way injuriously affected. We have not had to wait long for the promised trial on the human subject of the efficacy of this method to restrain the development of the bacillus. Such a trial was made in the wards of La Charite, and with such promising result (according to the *National Zeitung*) that Dr. Koch has been granted a prolonged leave of absence from his professional duties to enable him to pursue his investigations on a wider scale.

"The vast importance," says the *Lancet*, "of the possible results of such an inquiry upon the welfare of thousands renders it all the more necessary for the world at large to imitate the caution and reticence of Koch himself, bearing

in mind that hitherto he has not overstepped the limits of justifiable inference, and that he would be the first to deprecate either haste in drawing conclusions or a premature adoption of a method on which so much depends. Indeed, apart from the fact that we may be on the verge of a revolution in therapeutics, it may be that bacteriology itself is on its trial in this momentous investigation."

Evidently, from the cablegram received from Europe, Dr. Koch has made considerable progress in his researches since his reports to the *International Medical Congress*. It is stated that within a few days an article has appeared in the *Deutsche Medizinische Wochenschrift* entitled "*Further Communications on the Cure of Tuberculosis.*" In this article it is stated that Dr. Koch is not yet prepared to indicate the source from which the curative matter is derived; nor is he ready yet to explain the method of preparation. We gather, however, that the material, when it has been prepared, has the appearance of a liquid lymph.

The lymph is described as a brownish transparent liquid. When used it is injected subcutaneously by the means of a hyperdermic syringe of peculiar construction. The point of injection is between the scapulæ. The lymph, before being employed, is diluted with water. The attenuation should be perfectly sterilized by heat and preserved in tubes whose mouths are filled with wadding.

Prof. Koch injected twenty-five-hundredths of a cubic centimeter under the skin of one of his upper arms. He was affected very markedly. He had a very violent rigor, the shivering lasting nearly an hour, and was accompanied with nausea and vomiting. Afterward the temperature rose to 39.6 centigrade. After twelve hours the symptoms abated, but a feeling of lassitude and of heaviness of the limbs continued for several days.

The experiments conducted show that the lowest limit of effective strength of the fluid is one-hundredth of a cubic centimeter. When this strength is used with a tuberculous person there is produced a strong general and local reaction, manifested by fever, which usually begins with shivering, the temperature rising to over 39 centigrade, sometimes to 41. Pains are suffered in the limbs. There will be cough, and much irritation and great exhaustion. With some there will be nausea and vomiting. Eruptions often appear on the body, the skin having a jaundice hue. These symptoms usually last from twelve to fifteen hours,

and after they are over the patient usually feels better than before.

After the patient has been under treatment for three weeks, doses of the fluid of five hundred times the strength of the original dose can be applied. As a general rule the coughing and expectoration are increased somewhat after the first injections. Then they become gradually less, and, in the most favorable cases, will ultimately wholly disappear. In the cases that have been treated, the expectorations gradually lost their purulent property and assumed a mucous character. The number of bacilli decreases only when the expectorations begin to assume the mucous appearance. They then disappear entirely for a time, but on occasions again appear until expectoration totally ceases. At the same time the night sweats cease, the patients begin to look better and increase in weight. Patients who have been treated in the early stages of phthisis have all been freed from morbid symptoms within from four to six weeks, when they may be regarded as cured.

Consumptives with large cavities in their lungs usually only receive temporary benefit. It could hardly be expected that, in cases of persons whose lungs had suffered the loss of a large amount of their tissue, and had become infiltrated with pus in consequence of the large cavities not being able to limit it within themselves, recovery could take place.

Prof. Koch says that not sufficient experience has yet been collected to justify the expression of any opinion in regard to the efficacy of the remedy.

A host of physicians from all parts of the world have gone to Berlin to hear from Koch himself about his virus for the destruction of the tubercle bacilli. There is also said to be a regular exodus from the Mediterranean shores of consumptives to Berlin to be treated by Koch. Additional hospitals are being constructed.

FURTHER INFORMATION IN REGARD TO KOCH'S CURE FOR CONSUMPTION.—Since preparing the article which appears in another place, in regard to Koch's claim of having discovered a cure for tuberculosis, and in which the latest information by cablegram was given, we have received the *Lancet*, of London, of November 8. In this number of the *Lancet* is a letter from Berlin which contains a quotation from the *Posener Zeitung*, a portion of which we will copy: "After

having been successfully tried on animals for months past, Koch's experiments have now been tried on a considerable scale in the department of the Charité, of which Prof. Senator is the head. Patients in all stages of consumption, especially in the first stages, have been subjected to the new treatment. The results are so satisfactory that Koch thinks the time has come for the fact of success to be communicated. That one so eminently cautious has resolved to take this step is a factor of very considerable moment in judging of the matter, for even medical men are forced to rest content for the present with the scanty statements with which he has met the interest of the whole world in his investigations. Koch has warned against exaggerated expectations. He insists upon subjecting the method to the test of experience. The remedy is a substance consisting of weakened cultivations of tubercle bacilli in combination with a metallic solution, and is applied by inoculation. It thus bears a certain resemblance to vaccine, but the difference lies in the circumstance that vaccine is introduced into the healthy body, whereas Koch inoculates bodies already invaded by tubercle bacilli, so that his method is more analogous to Pasteur's attempts against anthrax and hydrophobia. Koch will publish his investigations and their result as a whole, and will likely do so in the form of a lecture."

It is stated that Koch's method applies not only to tuberculosis, but also to diphtheria, cholera, and all other bacterial diseases. If the virus of degenerate tubercle bacilli checks the vitality of undegenerate ones, this probably will be the case with all bacteria.

An editorial in the same issue of the *Lancet* says that "the material which Koch has at length discovered is apparently not of the nature of true lymph, but contains inorganic substances, together with attenuated cultures of the bacillus. It is said to be difficult and expensive to prepare, and there is reason to fear that unless very stringent precautions be taken, less powerful agents may be introduced, and the true method thereby discredited."

Both Profs. Leyden and Nothnagel have expressed themselves in very hopeful terms of the value and importance of the discovery. The authorities of Charité Hospital intend to place one hundred and twenty beds at the disposal of Koch after January for the purpose of treating patients by his germicidal method.

INTERESTING TO LIFE INSURANCE COMPANIES.—Dr. Thos. J. Mays, of Philadelphia, has been making inquiries as regards the causes of death among firemen. Last August he sent circulars to officers of the fire departments of many of the large cities of this country, containing the following questions: Duration of observation? Are any but able-bodied men admitted to your service? Number of deaths from consumption? From accident? From pneumonia, pleurisy, bronchitis, asthma? From other diseases? Of the 434 deaths from all causes, 31.04 per cent. were from consumption; 8.74 per cent. from other diseases of the lungs; 28.11 from other diseases than consumption and other diseases of the lungs; 29.95 per cent. from accidents.

According to the *Mortality Experience of the Mutual Life Insurance Company, of New York, from 1843 to 1874*, published 1875, consumption caused 17.61 per cent. of the total mortality of 5,224 insured lives, showing that this falls short 16.12 per cent. of the firemen's death-rate from this disease. Now the average mortality from consumption among the general population between the ages of twenty and seventy, as founded on the statistics of a number of large American cities, is 27.29 per cent., which exceeds the death-rate among the insured 9.68 per cent. Basing our estimates on the mortality of insured lives, we add 9.68 per cent. to 16.12 per cent., and the product, 25.80 per cent., represents the liability of the firemen to consumption over and above that of the general population. If we now add the latter to the death-rate of the general population, we get 53.09 per cent., which represents the relative death-rate of firemen from consumption. In other words, if the whole adult population were turned into firemen, 53.09 per cent. of all their deaths would be caused by consumption.

ANTAGONISM OF ERYsipelas AND DIPHTHERIA.—On page 735 of the present issue of the MEDICAL NEWS is an article with the heading here given, translated for the NEWS by Mon. E. A. Quetin, a *Juge de Paix*, of France, residing in the city of Tonnerre, France. The article announces a discovery claimed to have been made by Babtchinsky, of Russia, and first published by him in the *Journal d' Hygiene de St. Petersburg*.

If it should be confirmed by further researches that erysipelas and diphtheria are antagonistic to each other—that cases of malignant diphtheria, which is almost necessarily a

fatal affection, can be cured by inoculation with the virus of erysipelas—the discovery of the fact will be ranked as fully equal to the discovery of Jenner, namely, that inoculation with the virus of kine-pox will give immunity against attacks of small-pox. Jenner's discovery has probably saved millions of lives; so, also, will the discovery of the Russian doctor save millions of lives, if it should be confirmed by the experiments of others.

It seems most remarkable that, at this time, there should be brought to the attention of the profession of the world the announcement of two great discoveries for the cure of two diseases that have hitherto been regarded incurable—consumption and malignant diphtheria. If Koch should establish the validity of his claim of having discovered a method of curing consumption, the average length of human life will be materially increased by his discovery alone. Still greater will be the increase if it shall be demonstrated by investigation that the poison of erysipelas, or, rather, the bacillus of erysipelas, is antagonistic to the bacillus of diphtheria.

If the Russian physician's discovery shall be proven to be a valid one, we will claim for the MEDICAL NEWS, through the kindness of Judge Quetin, the honor of being the first journal to announce it in this country.

By the way, Judge Quetin, a number of years ago, was well known in Cincinnati. During the reign of the late French Emperor, Louis Bonaparte, he made himself so obnoxious to those in authority, by his open advocacy of republican government, that he was under the necessity, to escape imprisonment and may be death, to seek refuge in this country. Having lost his property in becoming an exile, he had to find something to do to win bread for himself and family. Being a man of education, he obtained a position in the Cincinnati University to teach his vernacular language to the students. He also gave private instructions in French to not a few of the best citizens of Cincinnati. But, loyal to his native country, and loving it beyond all other objects of affection, so soon as the usurper of authority was driven out of France and a republic was established, he returned to the land of his birth, and is now living there, an honored citizen and filling a high office. He is older now than when he walked the streets of Cincinnati, and gray hairs are silvering his head, but still he is full of life and vigor, and none are found more industrious and more

useful. We hope that we will frequently be able to present to the readers of the MEDICAL NEWS interesting translations from foreign journals by him. In his younger days he was a student of medicine, but circumstances prevented him from completing his studies. He is not, therefore, by any means unskilled in medical lore.

OHIO HUMANE BAZAR.—The Ohio Humane Society, at our writing, has in full operation the Bazar for which the humane women and men have been preparing for several months. We would like to give a description of it, but we have not the space, and if we had, our descriptive abilities would fall short of doing it justice. We can only say that the immense floor of Music Hall, and that of adjoining apartments, is covered with beautifully decorated booths, some of them representing various nationalities, as Greece, Spain, France, Switzerland, etc.

The contributions to the Bazar have not been limited to citizens of Cincinnati and to the State of Ohio, for charity is not local. He is our neighbor who needs, whether he lives next door to us, or resides in Russia. The people of Cincinnati gave thousands of dollars to the sufferers of the Chicago fire, to the starving in Ireland, to those made homeless in Charleston by earthquake, to those rendered destitute at Johnstown, Pa., by having their houses swept away by flood in consequence of a great reservoir giving away, etc. When it was noised abroad that the Ohio Humane Society intended to hold a great Bazar that they might, with the proceeds, build themselves a home, donations of merchandise with which to fill the booths were sent from Boston, New York, Philadelphia, Buffalo, Rochester, Indianapolis, St. Louis, and many other places.

On taking a hasty glance through the booth devoted to sale of drugs, medicines, medical, surgical and scientific instruments, we found represented, by contributions, nearly every drug and instrument store in Cincinnati, large and small. Among other contributions from a distance were the preparations of Messrs. Eli Lilly & Co., of Indianapolis, and Reed and Carnick, of New York, names familiar to the readers of the MEDICAL NEWS by their advertisements and by the reputations they have made. Such firms are evidently striving to do all the good they can. They labor to benefit by their meritorious preparations and to assist the helpless by their donations.

DECEASE OF C. A. MILLER, M.D.—Just as we are completing the present issue of the MEDICAL NEWS, we learn that Dr. Chas A. Miller, Superintendent of Longview Lunatic Asylum, has passed away. Though he had been an invalid for over two years, suffering, we understand, with diabetes mellitus, and it was known that he could not survive long, yet his death, when it came, was sudden and unexpected. Near four o'clock, on the morning of his decease, he awoke and remarked to his wife, "I have had a very refreshing sleep." Almost immediately his head fell over to one side, and he was dead.

We knew Dr. Miller for many years and always highly esteemed him. He was Superintendent of Longview for over twelve years, and conducted the institution in a manner satisfactory to the Board of Trustees, to his friends, and creditable to himself. His administration was superior to any of those preceding it. When he took charge of the Asylum everything was in disorder. He brought about order and classified the inmates. When it is considered that during a great part of the time he was at the head of the institution the number of the patients was nearly double that which the buildings were expected to hold when built, it must be admitted that he displayed very great executive ability in his management.

Dr. Miller was born in Athens County, O., August 27, 1839. He was, therefore, in his fifty-second year. He leaves a wife, son and daughter, who will have the sympathy of their many friends in their great bereavement.

SUCCUS ALTERANS.—*Dear Sir:*—It will no doubt interest you to learn that I have been very much delighted with the action of Messrs. Eli Lilly & Co.'s "Succus Alterans."

In one case of specific disease of many years' standing, my patient has been obliged to take Pot. Iod. in large, depressing doses ever since the onset of the attack, and it really seemed that he would be doomed to a *life of iodide of potassium*. I gave him succus alterans, and in three months he was a different man; in six months he was practically cured, and he has been enabled to do without iodide ever since the commencement of the new treatment.

As an alterative tonic, its effect is simply splendid.

Yours faithfully,

J. STENSON HOOKER, L. R. C. P. & S.
CLIVE VALE, Hastings.

THE
CINCINNATI MEDICAL NEWS.

VOL. XXIII. No. 276. } DECEMBER, 1890. } VOL. XIX. No. 12.
 Old Series. } New Series.

Original Contributions.

A Case of Remarkable Injury, with Recovery.

A Paper read before the Tri-State Medical Society of Alabama, Georgia and Tennessee, October 15th, 1890, by E. A. Cobleigh, M.D., Dean and Professor of Theory and Practice of Medicine in the Chattanooga Medical College, Chattanooga, Tenn.

Gentlemen of the Tri-State Society:—I have the pleasure of presenting to you to-day, though in a hastily written form on account of press of other duties, the report of a case of injury, which, to me at least, has seemed unique both in the light of its final result, and as to many of its manifestations while under my observation. With the report I hope to present the patient himself a little later.

Owing to the peculiarities of the case, you will pardon me if I go into details somewhat at length, though I will be as brief as *completeness* of narration permits.

About three o'clock on the afternoon of August 6th last, I received a telephone summons to go hurriedly to a manufacturing establishment in this city, where I was informed that a workman had just received a terrible injury, but the nature of which my excited informant at the 'phone could not state. Dr. Hosket was sitting in my office at the time, and I invited him to accompany me, to which he readily assented. Taking my "emergency" satchel along in the expectation that some operation might be necessary, we repaired with due despatch to the place. Before reaching our destination, we could see several persons bearing a wounded man from one department of the works to another, nearer the street; the victim being transported in a chair, and in an almost upright sitting position. Having deposited their burden, by the time of our arrival, on a cot which was at hand, I stripped him to the waist, and undertook to place him in a recumbent posture, both for the comfort of the patient, and to facilitate my own examination of his hurts.

This was at once found to be utterly impossible, owing to the nature and degree of the injury sustained; every effort to materially lower the head and shoulders being attended with symptoms of collapse of an urgent nature. So he was propped in a semi-recumbent position, and the following history was obtained while we made our physical examination of the man:

An old well, used for supplying the boilers with water, had become inadequate for the purposes of the rapidly enlarging factory, and for a considerable period of time, work had been going on in the way of deepening said well, until it had reached sixty (60) feet below the surface. During the day a heavy steel drill had become so dull that another and smaller one had been substituted for it, while the larger one went above for grinding on the power grindstone near the mouth of the shaft. This had been sufficiently sharpened, a loop of rope fastened around it, and a fellow-workman was lowering it to the men below, when the noose loosened at a depth of about ten feet from the surface, slipped off, and let the implement go dashing down on the men at the bottom, with no warning worth mentioning; and it had struck the patient lying before me, after falling about forty-five or fifty feet.

At the bottom of the well some of the men were holding the drill (then in use) while Tony Houston, colored, the wounded fellow, was standing upright on a rough little platform, about eighteen inches high, which had been built to allow the striker to get an elevation from which to wield his sledge to the best advantage. It seems that they were awaiting the arrival of the larger tool from above when the accident happened, and standing erect, but not all of them looking up, as there was much dripping of water from the sides of the well, necessitating heavy "gum coats" for the workmen.

The implement went down sharp-end first, and nearly or quite perpendicularly, striking the victim unexpectedly, though the man at the top had shouted that the drill was falling. It struck the man on the back of the neck, and ploughed through the tissues to emerge from the right side of the chest, there protruding about eight inches, absolutely impaling him. Notwithstanding the force of the blow, Tony was not fairly knocked down, but was forced against the sides of the well in a sort of crouching position, without losing consciousness for a moment even. He avers that he

was standing absolutely erect at the time of the injury, though I surmise that he is mistaken in this matter, and I lean strongly to the opinion that he was very slightly stooping forward, perhaps from the warning given from above, as a man will instinctively cower when dreading that something will fall on him. With an exclamation of pain, and realizing what had happened, he stepped down from the platform, supporting himself against the side of the well, and called on a fellow-workman to pull out the drill. A very tall and stalwart negro (whom I saw at the time of my visit) undertook to do his bidding, standing on the same level with Tony, and finally using both hands for the purpose, but failed. So he mounted the platform and tried again by a steady pull, which did not budge the impaling instrument; and in his excitement, determined to get the thing out, he gave it that to-and-fro motion, with the powerful leverage of the long handle, which one often sees resorted to in pulling posts out of the ground. At this juncture the drill loosened, and he extracted it from above—just the reverse of its direction of entry.

Tony was now set in a bucket, very imperfectly fastened to the well-rope by a noose passed around him, and, holding mostly by his own efforts, was drawn to the surface, placed in the chair before mentioned, and conveyed to the work-room adjoining the office.

I will preface here by saying that Tony is a man of magnificent physique and splendid muscular development, having worked at hard and steady manual labor in this same factory for seven or eight years. He stands five feet eleven inches high; is twenty-eight years old; scarcely ever ill a day in his life, though formerly given to occasionally spreeing; and weighs a hundred and eighty-five pounds.

My examination developed that the wound of entrance was situated one and one-half inches to the right of the spinous process of the fifth cervical vertebra, just at the point where his neck *began* to broaden toward the shoulders, and the drill had only missed the spinal column by a hair's breadth. Passing downward and very slightly forward, and to the right, leaving a rather smooth opening (oval perpendicularly) with somewhat inverted edges, it resembled the old-fashioned wounds of entrance of round shot, not very large—indeed, not so immense as one would expect from the size of the wounding instrument, yet sufficiently so for the cervical muscles and fascia to show plainly in the wound,

especially if it was forcibly opened. The shape of the wound made it closed like a valve, yet air was entering and being expelled with a pink froth at nearly every respiratory effort, though there was no considerable hemorrhage. I first thought this air came from the air-passages of the lungs, but I have later formed the opinion that it was sucked in and out by the action of the diaphragm during the process of breathing.

From here the drill passed into the chest cavity between the scapula and the clavicle—at its very apex—without damage to either of those bones, impinging on the third and fourth ribs, which were both fractured from behind, directly in the line of the wound (evidently the fragments being parted as by a wedge while the drill was *in situ*), then passing down on the anterior surface of the fifth and sixth ribs, without injury to either, and emerging by a great gaping and ragged wound, with much eversion of its edges, just at the inferior border of the latter rib, and over the interspace below; its center being, at the time of the examination, two inches below and one and a half to the right of the nipple. There was only moderate bleeding from this wound, into the opening of which I readily introduced the tips of three fingers, and no air was escaping here. The skin and subcutaneous tissues seemed to be so absolutely deadened by the magnitude of the injury sustained, as to have completely lost all their normal elasticity. I passed two fingers up the tract of the wound their full length, entering the pleural cavity with their tips under the broken ends of the lower fractured rib, which could be distinctly felt. Everything felt torn and indefinite, the ends of the broken bone easily movable; but I was not able to satisfy myself by the touch with any degree of certainty, whether the subjacent surface of the lung was injured or not, though I thought it was. From top to bottom of the wound in its entire length, it measured in a direct line at that time fourteen and a half inches; and he must have had buried in his anatomy fourteen and a half inches of steel, an inch in diameter.

On withdrawal of the fingers, the wound closed by collapse of its sides, and prevented any profuse degree of hemorrhage externally. There was very intense pain and a marked degree of shock, as shown mainly by the pulse; the mind remaining clear throughout. The integument, however, was quite clammy, and he complained of a great deal of chilliness, without any distinct rigor. There was

very extreme rapidity and difficulty of respiration, some gasping, and I was strongly of the opinion that he was going to die in a short time; especially as I found the signs of depression increasing fast, the pulse losing all tone, flickering, irregular, intermittent, and the mucous surfaces blanching. I so expressed myself without hesitation to the employers, but added in a few rare cases men had recovered miraculously from seemingly as desperate injuries.

He was at once given $\frac{1}{100}$ grain strychnia, $\frac{1}{4}$ grain morphia, and $\frac{1}{100}$ grain atropia hypodermically. In fifteen minutes this was repeated, and twenty-five minutes later the strychnia was again resorted to. Very perceptible reaction resulted, as shown by the improved state of pulse, and an hour and a half after I first got to him, I had him removed to his home—one square distant—in the same chair previously in use. All motion was exquisite torture to him, especially the slightest moving of the right arm or the neck. He was taken home in a semi-recumbent posture, with two men steadyng his head in fixed position as they walked beside the bearers of the chair. Thus far the only treatment of the wounds by me consisted in applying pledgets of iodoform gauze over both openings, which readily adhered in place by the oozing from same. No alcoholics were given from the start, as I was anticipating haemoptysis at any moment, and feared the least overstimulation. There was only a slight (suppressed) cough, and no spitting of blood did take place, nor was there any emesis, though it was several times seriously threatened.

At his house he was disposed in nearly the same position previously resorted to, but put on a cot. Indeed, he could not be laid down at all; every effort producing the most violent pain and alarming dyspnœa. Without further medication and no other dressings, I left him for an hour to meet another previous engagement.

On my return he was resting as well as could be expected. Auscultation showed only shallow respiration in the upper part of the right side, almost no motion at all of the injured side of the thorax, solidity of the whole lung except the region of the upper lobe, and this locality afforded all kinds of coarse and fine moist rales. I should have stated at first that a previous auscultatory examination had shown the same state of affairs when the injury was received. There was no tendency to the least displacement of the ends of the broken ribs, and every movement of any part of the body,

but especially of the head, neck, right arm and trunk, proved so painful, that I felt secure of no danger from this source, and I determined to leave him with nothing on the body save the gauze, and a blanket to cover the surface. Morphine in sufficient doses to secure for him as reasonable an amount of comfort as possible was ordered, and he was left for the night in the care of two excellent colored attendants, who had been furnished by his employers. Temperature now was normal, and pulse of good volume, but quick, owing to the loss of respiratory surface of the lung. Cough he could not, because of the extreme suffering it produced, yet there was much inclination to do so, which he resisted with grim determination. Respiration of course continued rapid as at first.

I will here say that I had intended to present the original drill before you for your personal inspection, and have photographs of the instrument taken for publication, but it has been impossible for me to obtain possession of the drill, and I can only give you the measurements of same, which were accurately taken at the time. Its dimensions were found to be as follows: Six feet long; one inch in diameter, except at the sharpened extremity, where it was flattened out to a long diameter of one and a half inches; it was an octagonal bar of solid and well-tempered steel, weighing seventeen and three-quarter pounds. You can form a very accurate idea of the thing, if you will picture it in your minds as being a sharpened "crow-bar," such as you see in everyday use among masons, and where heavy work is being done.

Next morning—the 7th—I found Tony had passed a very restless, wakeful night of suffering, but otherwise was not materially changed in condition from the night before. There had been but trifling hemorrhage from the lower opening, chest still full of blood-clot rales as before, no cough nor expectoration to speak of, and no blood in what he did spit up. But there persisted a very peculiar respiratory sound, and which I have never heard before, nor can I describe it with any degree of precision, so as to give you a reasonable notion of what it sounded like. This was mingled with the other numerous chest rales, and the best description I can give of it is to liken it to the puff of the *valve* of a blacksmith's bellows—short, sharp, coarse, deep in tone, heard with both respiratory movements, but best and most pronounced at the beginning of expiration. It

sounded much like air passing into the chest cavity from the larger tubes of the bronchi, yet I never could clearly make out that this was the case. No air was now passing through the openings made by the drill externally, and no signs of any emphysema of the tissues. Immobility of the entire right chest continued, the breathing being largely abdominal. Talking above a whisper was impossible, seemingly from a loss of power in the vocal cords or the muscles required for phonation. This latter continued for three or four days, and disappeared gradually. Right arm was absolutely powerless; also continuing for many days, seeming to depend on the soreness of those muscles needed in its movements at the shoulder and neck, as well as the injury done to some of them directly, or by the breaking of the ribs to which they happened to be attached. So pronounced was this condition that he would not allow the arm moved by another for some days, and afterward he had it moved with great care, and much complaint. Little appetite. Patient still compelled to half sit, in one position solely, reclining on the back. Most of his complaint now was of the pain over the vicinity of the broken ends of ribs, and in the injured cervical region. Arm only troublesome *when moved*. I now adjusted a bandage around whole of the thorax, using a stout towel for this purpose; drawing it pretty tight and fixing it with safety pins over the gauze, which had been renewed. No straps were used, as immobility of the right chest was perfect enough for all practical purposes, no tendency to any displacement of the broken ribs, and I wished to make free and frequent auscultation over the injured pleural cavity.

At three o'clock P.M., condition about the same, but felt more comfortable with bandage on than before. My impulse was from the very first to enlarge the wound of exit, or otherwise provide for free drainage from the chest cavity, fully anticipating extensive empyema; but this was deferred mostly because I regarded the prognosis as desperately bad from the beginning. Pulse was now eighty-two, respiration forty, and temperature one hundred and three-fifths, showing reactionary fever. Appetite had improved. At nine P.M., pulse was eighty-six, respiration thirty-two, patient sleeping. Opiates, a placebo, and cleansing of the external wounds, were the only remedial measures employed. Appetite had become craving during the day. Diet restricted to liquid foods in small quantity frequently repeated, so as not

to oppress the lung-action by distention of the stomach. Mainly confined to milk. Very thirsty.

On the 8th, at nine A.M., pulse ninety-six, respiration thirty-six, temperature one hundred. Rested well nearly all night. About the only complaint now is when he is moved in the least, and then his greatest solicitude is that his head and arm be carried along in exactly the same line with the rest of the body.

Skipping the record of the next two days, his pulse on the 12th was eighty-six, temperature a hundred and three-fifths. Other symptoms as before, but everything slowly improving. Rales, except the valve sound, all gone. Absorption of the clotted blood in the pleural cavity gradually taking place, and no special symptoms of interest. No fluctuation in chest and no signs of pus there. Wounds suppurating, but only a trifle.

At this stage the temperature fluctuated slightly for two or three days between $101\frac{1}{2}$ and $99\frac{1}{2}$. By the 17th, it had fallen to normal; absorption had freed the entire surface of middle lobe of the lung and part of the lower lobe, so that respiration was taking place nicely in them. Pulse was still rather weak and rapid, and he was put on general tonics—mainly quinine and iron—with generous feeding. By the 20th he could be moved from the couch to a chair so as to have his bed "made up." Neck still stiff, and side painful on motion of same, but otherwise not troublesome, and arm now movable. Capable of lying in any position he wished except on the right side, and sleeping well at nights. No cough worth mentioning at any time. Wounds granulating nicely under the simple dressings used, with very little suppuration, and he sticks to his bandage by his own expressed choice. About this time he was moved to the home of a sister, distant several blocks.

He now sat up more and more from day to day, was soon spending the most of his time in the shade of a tree in the yard, continued gradually but steadily improving up to the 30th, when both wounds were nearly well, the chest fully clear; and I discharged him as practically well himself; leaving him to wash and care for the rapidly granulating surfaces. His recovery seemed to be perfect; the ribs show no remaining callus, and so far as I have been able to determine there is no lung impairment. He is now hearty, and driving a dray for his livelihood, for a hardware firm.

At the time of the receipt of the injury, the distance

between the two wounds was, in a direct line, fourteen and a half inches. In a few days, contraction of the integument decreased this, and now it measures barely thirteen inches. The scar of exit has finally fixed above the point occupied by the original wound at the time of the primary examination. Then it occupied the interspace below the sixth rib; now it is situated about over the rib itself. Then it was two inches below the nipple; now only a half inch below.

I regard this case as one of remarkable recovery, fit to be recorded along with the celebrated "crow-bar" case of Maine, which was formerly classical in all the standard works on surgery, and the later case of abdominal perforation by a railroad coupling-link, which happened a few years ago in Kentucky. I consider it remarkable not only in itself and the recovery of the patient at all, but unique in many of its minute features. The escape from injury of any of the large vessels in the neck was most fortunate. So also as to the brachial plexus of nerves, and the subclavian vessels. Had it happened to the other side of the neck, this would probably not have been the case, because of the heart's relation to that side. The bare missing of the spinal column was another matter of peculiar luck for the patient. Probably no direction for perforation of the chest cavity with the same instrument, could have been deliberately selected to better advantage for the victim.

Again, I regard the case as unique because of the total absence of any active or high grade of inflammation of the pleura or pulmonary tissue of the injured side, the lack of any empyema as subsequent to the admission of free quantities of air to the pleural cavity, and the freedom from serious cough or hæmoptysis. I could not tell from the shape of the wound which way the flat and broad edge of the drill entered. But at first I was fully of the opinion that the drill had perforated the lung tissue, and that spitting of blood would occur within a few hours at the longest. This not happening, I changed my views as to the perforation of lung, and came to the conclusion that the instrument passed down along the front surface of the lung, which it doubtless pushed aside, crowding it out of the way by the inherent pulmonary elasticity—which latter is proved by the compression possible, and often observed from effusion into the pleural sac; this compression of course taking place at the expense of the air-cells. That the *surface* of the lung was injured is not untenable, I think; the drill probably

ploughing a furrow of some depth along its track, and haemoptysis being prevented by the small size of the torn air-tubes, as well as by the firm and uniform compression by the surrounding profuse hemorrhage clotting about the whole lower part of the lung, as if it was in the embrace of a tourniquet, and which absolutely prevented the entrance of air into its interior. Of course, this was not verified by an autopsy, and must therefore remain solely as an hypothesis. But in any case it does seem that final expectoration of blood or pus would have probably shown itself, which was not the fact, and which militates against the theory of injury of lung substance. Yet my clinical observation of the case led me very strongly (at the time he was under treatment) to the opinion that there *was* some degree of such injury. And the relative absence of confirmatory symptoms, such as are usual in like cases of damage to lung substance, would only be in line with the peculiarity of this particular case in the total absence of any signs of pus in the pleural sac after admission of air there in large quantities, as well as even the recovery of the patient at all after the receipt of so grave an accident.

The patient was present at the place of meeting of the Society for part of two days, during which time other papers had precedence. And when the doctor read this paper, Tony had been compelled to go away, and attend to his accustomed duties. So he was not finally exhibited, after all. But he is now driving his dray in the city of Chattanooga, working at hard labor and heavy lifting, for a wholesale hardware company.

During his illness, he was seen by Drs. Rathmell and Drake, colleagues of the gentleman who read the report of the case. Dr. Cobleigh presented a bar of steel before the meeting, of the exact diameter and shape of the original drill, except that it was not flattened and sharpened into a drill for actual use. He also exhibited a drawing on the blackboard of the instrument itself, so as to show the shape of the broad "drill-point."

The paper was read late in the session, when there was a press of other matters crowding on the Society, and the discussion was necessarily brief, but the opinion was expressed that the case was truly unique and remarkable in all of its features.

Translations from Our Foreign Exchanges.

Translated for the MEDICAL NEWS, from the French, by Dr. Illowy,
Cincinnati, Ohio.

PATHOGENY OF GLYCOSURIA AND DIABETES.

BY D. H. ARNAND.

WHAT physician, who, called by the exercise of his art to the presence of a diabetic, was not attracted to this seductive, obscure and difficult problem, the pathogeny of diabetes? Who is he that has not attempted a solution? It is thus that theory succeeds theory, so rapidly, and in such measure, that it seems almost impossible to imagine a new one; nevertheless, the enigma is still there, awaiting a satisfactory solution. I certainly do not intend to decipher it before the proper time; I desire to indicate here only what appears to me the best way for reaching this goal, and to run over rapidly several stations on this road.

The two words, "glycosuria" and "diabetes," are not synonymous. There is between the things that they represent a difference of kind and species, from the general to the particular, from the whole to the part. Glycosuria may be observed without diabetes being present; but the veritable diabetes, the saccharine diabetes, has never been observed without glycosuria.

There is, therefore, here a general problem, that of glycosuria, of which the pathogeny of diabetes is only a particular case, a constituent part. It constitutes, I certainly recognize it, the most interesting part, the most important part, so far as medicine is concerned. I will also add that it is the most difficult part, and that for several reasons, of which I will only cite one, that is: Though it be comparatively easy to produce, experimentally, a transitory glycosuria, we are still far from being able to produce a chronic and permanent glycosuria, a veritable diabetes.

Viewed in its ensemble, the pathogeny of glycosuria can be divided into four principal parts:—

1. Investigate that what I call the general pathogenic condition of glycosuria, that is to say, the necessary and sufficient cause of glycosuria in general, diabetic or non-diabetic.
2. Take up the diverse rational organic causes, more or

less remote, which necessarily tended to establish the preliminary pathogenic state.

3. Pass in review the various known causes of glycosuria, pathological or experimental, and ask yourself what is the mechanism by which the glycosuria in the various instances is produced.

4. Make a special study of diabetes, experimental or pathological, and endeavor to discover the mechanism or mechanisms of their genesis.

This simple enunciation of the problem suffices to show the greatness of its extent, and the impossibility of stating its solution in a few lines ; but it seems to me possible to seize hold in some one of its points, and to undertake especially *the research of the general pathogenic conditions of glycosuria*. That is what I shall attempt in this article.

I. Glycosuria is not a normal phenomenon ; at least, glycosuria appreciable by the cupric solution, by fermentation, and by the saccharometer. Several authors, following Brucke, have maintained the reality of a physiological glycosuria ; they have most frequently employed, to establish it, reagents, the proofs of which were not sufficiently made, and whose extreme sensitiveness is not a gauge of absolute security ; and with all this, however, they have not been able to establish more than the presence in normal urine of insignificant traces of glycose, and which have in no way diminished the vast difference that may exist as regards sugar in the urine between the normal and the pathological state.

Glycosuria is thus a symptom. However, all symptoms correspond to an abnormal state, to an alteration of the organism. It is the indication and consequence of it in such a way that it is impossible to see the symptom appear without concluding the presence of the abnormal state to which it is subordinated ; and neither can this abnormal state be produced without its developing the indicative symptom.

It is this abnormal state, this alteration, this lesion, material or dynamic, of the organism which I call *the necessary and sufficient cause, the general pathogenic condition*, or the DIRECT one, of the symptom. There is between these two terms, "symptom" and "pathogenic" condition, a constant rapport of correlation, of concomitance, upon which I deem it important to insist, and which one must well understand if any interest be taken in the following study.

Let us take up now the symptom glycosuria, and study its true pathogenic condition.

II. This condition can not be studied outside of the two factors that concur for the production of urine, viz.: The urinary apparatus and the blood which circulates in the renal parenchyma.

As to the urinary apparatus, the cause has already been decided; it is not to the whole or to part of it, that glycosuria can be attributed. For the accessory parts—ureters, bladder, etc.—this is very evident; but not the less certain for the kidneys themselves. It is true that renal lesions have been observed in diabetes, but these are neither initial nor precocious, they are not even constant, and in the majority of known cases of glycosuria the kidneys are free from all alteration. On the other hand, glycosuria is often wanting in the cases where the renal alteration is very evident and very advanced (nephritis, Bright's disease).

We must, therefore, go further, to the renal blood, to discover the necessary and sufficient organic cause of glycosuria.

III. The majority of authors believed that they had found this pathogenic condition in the *hyperglycaemia*. This, as we shall see further on, is only a hypothesis, and one, as it appears to me, not justified by the known facts.

It rests, moreover, on a physiological hypothesis, which is itself far from being sufficiently and satisfactorily demonstrated; that is, the hypothesis of *normal glycaemia*, which we shall attempt to refute at once.

C. Bernard estimated at 1 to 1.5 per thousand the quantity of glycose contained in normal blood, and the results obtained by other experimenters varied but little from these figures.

But, besides that, all physiologists are far from accepting these results, that some even deny absolutely the presence of any sugar in normal blood or only admit insignificant traces. I have already indicated in a previous article ("Circulation et rôle des hydrocarbone dans l'organisme"—*Tribune Medic.*, 1890, p. 439) the uncertainty in the results which the experiments gave to Claude Bernard and to other physiologists. In fact, we can not appreciate the minuteness of the quantity of sugar in the blood till we have submitted the same to a certain number of manipulations and chemical agents, which of themselves can falsify the results. Not that glycose can be thus fabricated out of whole cloth, but

the blood contains, as I believe I have demonstrated, a relatively large quantity of glycogene—and probably also of intermediary carbo-hydrates—establishing in some sort a continuous chain between the two extreme terms of the series, glycogene and glycose. And as among these carbo-hydrates there are some that border closely on to glycose, it is not impossible that these latter are converted into sugar as a result of the manipulations and of contact with the chemical agents, and that they may be measured as glycose whilst in reality not existing under that form in the blood.

It is, therefore, *not at all* demonstrated that *glycose* exists normally in the blood, at least in the whole extent of vessels, and especially about the region of the renal artery.

Everything seems to indicate that, on the contrary, sugar is not found at the latter point. And, in fact, if found in any quantity at this point, we could not understand the default of its elimination by normal urine, for sugar is unquestionably a crystalloid body and consequently easily dialyzable.

IV. Let us compare the various bodies contained in the blood plasma from the point of view of their elimination by the renal filter.

The greater part of these bodies can be brought together in three distinct groups :

1. The group of colloid substances not diffusible in the normal state by the kidney. Albumin is the type of this group. In this category we can probably place also the fats and glycogene, especially the latter, which is entirely wanting, or almost nearly so, in normal urine. This group is characterized by a non-elimination in the normal state, and by the possible but restrained elimination in a pathological state. The maximum quantity of albumin found in urine has been fifteen to one thousand, whilst the plasma contained but eight to nine per thousand of albuminoids.

2. The group of urea, the normal elimination of which is considerable. Authors vary somewhat in their figures as to the quantity of urea in the blood plasma; but the whole world is agreed upon this, that the quantity is extremely small. The figures adopted by Bouchard are sixteen per one hundred thousand, whilst urine contains normally about sixteen to one thousand. We thus see that the passage through the kidneys is very abundant. The quantity of urea may be still more augmented in a pathological state; it may also diminish, but never down to nought.

In this group may be placed the uric and hippuric acid, and, perhaps, also other organic matters, such as creatine, creatinine, xanthine, extractive matters, etc.

3. The group of mineral salts, substances dialyzable to a much lesser degree than urea, contained in normal blood in great proportion, and whose elimination, though different for each separate body, is still always superior to the proportion contained in the plasma. Taken altogether, the mineral salts whose proportion in the blood plasma is, in round numbers, 8.5 per thousand, are found in the urine in the proportion of 15.5 per thousand. If we go into details we find the alkaline chlorides contained in the plasma in the quantity of 5.905 per thousand (Schmidt), and in urine 10.231 per thousand (*Dict. de Dechambre*, Art. *Urines*, p. 505); the alkaline sulphates are found in the plasma in the proportion of 0.281 per thousand; in the urine, 3.10; the phosphates are found in the plasma in proportion of 0.787 per thousand, and in urine, 2.289, etc. These salts, it is true, may be abnormally augmented or diminished in the urine; but their rapport in the blood and in the urine is never comparable to that which is observed for urea, and, on the other hand, they never disappear completely from the urine.

This being laid down, we should be greatly embarrassed if we had to classify glycogen in one or the other of these groups. By its nature glycose approaches closely to the mineral salts. Like them it is diffusible, crystalloid. Nevertheless, in the normal state, it does not pass into the urine, or passes only in very insignificant quantity as do the albuminoids, and, in the pathological state, it may be eliminated in enormous quantities, differing but slightly from those of urea.

Let us acknowledge it, if sugar existed, in a free state, in the renal blood, it certainly comported itself in a manner very difficult to understand. Is it not more probable that if this body does not comport itself like its crystalloid analogues, it is because it does not exist in the blood in the region of the renal circulation?

V. Cl. Bernard is one of those rare authors who attempted to explain the paradox of normal glycemia. "Why does the kidney eliminate sugar when it is present in excess, and allow it to remain when it exists in much smaller quantity? By a reason of a general nature. The substances are not expelled from the blood unless their proportion surpasses

certain limits. * * * The things happen as if the kidney were a sort of overflow by which the superabundant elements escaped. Its activity does not come into play until the susceptibility of the organ is excited beyond a certain degree" (*Cl. Bernard, Lecon. sur le Diab.*, 1877, p. 372).

However ingenious these explanations may be, they are far from convincing me, and I shall say freely what I think of it, despite all the respect I feel for the memory of the great physiologist.

To explain a fact vaguely "by a reason of a general nature" seems to me insufficient in the present state of our science, and to lay down the axiom that the substances contained in the blood are not expelled until their proportions surpass a certain limit, is announcing a proposition that is contrary to the fact. In reality, is the urea not expelled from the blood even when its proportion is below the normal? Is not the same the case with the other mineral salts? Is not albumin eliminated by the kidney even when its proportion in the plasma is sensibly diminished, as happens often in Bright's disease? The kidney is, therefore, not an overflow by which only the superabundant elements escape.

Finally, to say that the kidney does not enter into play until stimulated beyond a certain degree, is to assign to the kidney in the process of elimination an active role which is far from being demonstrated at the present day.

For Cl. Bernard it would be the kidney which eliminates the substances contained in the blood, just as the muscle contracts by virtue of an inherent activity, brought into play by a sufficient excitation. Let us admit that the things do so happen; we could understand how it happens that the foreign bodies in the blood—medicaments, poisons, and the products of excretion, as urea—are very rapidly eliminated by the urine, more rapidly perhaps than the law of diffusion would seem to allow; we could thus explain the excessive elimination of sugar in diabetes, but we can in no way account for the lack of a glycosuria in normal glycemia. Sugar, I repeat, is a dialyzable body; it has, when dissolved, a natural tendency to traverse organic membranes, and this in the absence of all active participation of the tissues. Why is this dialysis through the kidney not affected in the normal state if it be true that blood contains 1 to 1.5 per thousand of sugar? Why does it not occur when the proportion rises as high as 2 or 2.5 per thousand of glycose?

Shall we say that the kidney, whilst it attracts and eliminates those substances contained in excess in the blood, at the same time repulses those which are present only in useful proportions? This, then, would indeed be a filter of great discernment. We would be easily drawn into imagining a veritable *Archéus* watching over the functions of the kidney, and enjoining upon them to take hold of the deleterious material, and to leave the blood enjoy in peace the useful materials. The conception of such an exaggerated vitalism would be the delight, perhaps, of ancient medicine; but it seems to me unworthy of the actual state of science, unworthy also of the great physiologist to whom one would be tempted to attribute it, if the consequences of his explanation were pushed too far.

It must, therefore, be admitted that the reasons invoked by Claude Bernard are not entirely satisfactory, and they can not be otherwise, because we can not explain the co-existence of two absolutely irreconcilable facts: The presence of sugar in solution in the normal blood of the renal artery, and the absence of a glycosuria.

I am not the only one who has been struck by the contradiction presented by certain phenomena simultaneously admitted. M. Bouchard expresses himself in these terms: "Whilst in the normal state the kidney, which is very permeable to urea, seems impermeable to sugar, in diabetes the conditions of elimination seem to be altogether modified. * * * One would thus be led to believe that there are different laws for the elimination of sugar, varying according to the state of health and according to the state of sickness."

But despite, the matter was generally passed over and the reality of physiological glycaemia admitted, and some investigators, desirous, undoubtedly, of establishing harmony between the physiological facts at any price, have admitted the existence of sugar in the normal urine; but they could not discover more than traces, which is not at all in rapport with the quantities accepted as being present in the blood, since the day of Cl. Bernard. The problem was in no way solved by them.—*Trib. Medic.*

(To be continued.)

Mosquera's Food Products—Beef Meal, Beef Cacao.

PARKE, DAVIS & Co., whose reputation for original work has long been established, announce that after thorough study of the various food products, they can now supply preparations which will fulfill all the requirements for therapeutic and dietetic use.

Physicians, in their practice, very frequently meet with cases where nutrition is of more importance than medication; in fact, cases where nutrition is the only agent they can count upon. The question of replacing the waste of tissue, where normal nutrition is inefficient, by means of concentrated or predigested foods, is one that always presents many difficulties, there being very few preparations, if any, that meet all the requirements of the medical profession.

Heretofore medical practitioners have had at their disposal a great variety of preparations of meat. These are divisible into four great classes. We have, in the first place, the extracts of meat, prepared after the formula of Liebig; then the so-called meat juices; next the ordinary powdered meats; and, finally, the meat peptones.

The ordinary process of preparing meat extracts involves a simple extraction of meat with either warm or cold water, and an evaporation of the resulting solution continued until reduced to a thick liquid or paste. This extract contains the inorganic soluble salts of the meat and some stimulating organic matter, but none of the nourishing, flesh-forming albuminous substance.

The meat juices are merely cold extractions of the meat, and such products contain some soluble albumen, which coagulates out upon boiling, and, naturally, can not amount to much more than four or five per cent. The meat juices, therefore, possess but little nutritive value.

Powdered meats, as heretofore known, are nothing more nor less than the residue left after extracting all the soluble constituents. Dujardin-Beaumetz and several therapeutists, as a result of a careful line of experiments, concluded that this powder possessed a high nutritive value, and could be employed to advantage in the treatment of certain diseases (consumption and dyspepsia especially). That they are concentrated nutrients is a fact, for beef, in its natural condition, contains seventy-five per cent. of moisture, all of which is driven off in the preparation of the powder. The

fact, however, that these powders are liable to become rancid, or else have been deprived of the inorganic salts, peculiar to meat in its natural state, which salts are quite essential in the digestive process, is an objection to the meat in this form. Moreover, powdered beef requires just as much effort on the part of the stomach to digest it as does ordinary beef, and for this reason can not be regarded as a proper food for patients suffering with derangement or weakness of the digestive organs.

Another group of meat preparations embraces the meat peptones.

Peptone is the ultimate product of digestion, and the form in which the albuminous or proteid matter is assimilated by the system. These peptones are invariably the product of the artificial digestion of meat by animal pepsin and hydrochloric acid, or, although to a smaller extent, by the digestive ferment of the carica papaya. These are the only preparations really valuable as nutrients. But the physician meets here with another difficulty, in many cases insurmountable; the taste of the peptones is, more or less, bitter and objectionable to the palate, so that patients either absolutely refuse to take them, or take them only with the greatest repugnance. Besides this, their price is comparatively so high that frequently the physician is obliged to abstain from prescribing them.

All the difficulties heretofore encountered by the medical profession in the use of predigested foods, have been overcome by the new food products of the Mosquera-Julia Food Company.

Mosquera's Beef Meal contains all the stimulating principles of the extracts of meat, and, in addition, the nutritive principles which the extracts lack; all the albumen of meat juices without their weakness; all the strength of powdered meats without their rancidity and insolubility; all the peptone of the peptonized meats without their bitterness.

The claims we make on behalf of Mosquera's Beef Meal, therefore, can not be overestimated; they are based on its analysis and properties, and may be condensed as follows:

Mosquera's Beef Meal is a perfectly pure predigested meat, containing all the nutritious constituents of good lean beef, half of which are in soluble form, ready for immediate assimilation, and the other half easily digestible by the gastric and pancreatic juices. Therefore the entire prepara-

tion, being practically dry, is composed of nutritive matter, containing about forty per cent. of soluble peptone and albumose.

It represents, in actual nutritive value, at least six times its weight of good lean beef.

It is perfectly palatable, and will be tolerated with ease by the most delicate stomach.

It admits of being administered in a variety of forms, thus avoiding monotony in the food.

It is the most nutritious as well as the most economical concentrated food.

It must be understood that Mosquera's Beef Meal is not a ready prepared dish, but rather a raw product. It is nothing more than a concentrated beef, converted by artificial digestion into a form which renders it assimilable upon mere contact with the mucous membranes of the alimentary canal. It, therefore, must be treated by the nurse or cook with the same regard to flavor and taste they would exhibit in the preparation of beef steak. Ordinary beef, if simply boiled in water, would neither yield a palatable bouillon nor be eaten itself; salt and other condiments must be added to it. So, also, in the use of this beef meal, ingenuity has necessarily to be exercised in its preparation. No matter how palatable or nutritious a food may be, unless presented in a variety of forms it will inevitably become monotonous and even repulsive, this being especially true with patients whose digestive organs are in a weak and debilitated condition. If, therefore, a patient is to take the beef meal for a length of time, it must be administered in a variety of forms to insure the benefit of all its nutritious value.

It may be given in different soups, condimented to suit the taste of the patient, as also mixed with biscuit powder or oatmeal porridge and milk and sugar. Again, it may be mixed with chocolate, which makes a delicious beverage, or given in the form of a sandwich, and finally as a plain beef tea, simply dissolving it in hot water, adding salt.

Mosquera's Beef Cacao consists of equal parts of beef meal, sugar and a superior article of Dutch cacao. It does not require cooking, but may be mixed with warm milk exactly like ordinary chocolate, and so completely is the taste of the beef disguised that it can not be detected. Requiring therefore no previous preparation it is most conveniently administered.

To physicians interested a pamphlet fully descriptive of the special advantages, uses and methods of administration of these preparations will be mailed on request, and samples will be sent to physicians who desire to clinically test them in practice.

Selections.

Appendicitis and Perityphilitic Abscess.

BY ARPAD G. GERSTER, M.D.,

Surgeon to the German and Mount Sinai Hospitals; Professor of Surgery at the New York Polyclinic.

UP to within a recent period of time it was the prevalent belief that perityphilitic suppuration was located retroperitoneally, and most generally in the iliac fossa, whence it found its way to the surface by pushing aside the peritoneal reflection corresponding to Poupart's ligament. Willard Parker's method of incising perityphilitic abscess was based upon this view.

It can not be denied that the development of most circumappendicular abscesses seems to confirm this view, and that the rules laid down by Parker for the treatment of this group of suppurative processes have yielded, and continue to yield, very satisfactory results in very many instances. Still it must be said that the exceptions to Parker's type are considerable in number. Formerly they were classed as cases of general or localized "idiopathic peritonitis." Their treatment was non-surgical, and their issue very uncertain and often fatal.

We owe the better understanding of the elements of this phenomenon to Treves and Weir, but principally to McBurney, who demonstrated that in the vast majority of instances the formation of abscess in the right iliac fossa was due to intraperitoneal inflammatory processes, mostly of the vermiciform appendix, and commonly accompanied by ulceration, necrosis and perforation of this viscus. The frequency of the location of perityphilitic abscess near the parieties of the right iliac fossa is explained by the frequency of the superficial *situs* of the appendix in this region. In these cases the type of development so well described by Parker will prevail. But in a very large proportion of instances

the vermiform appendix, either congenitally or in consequence of acquired peculiarity, occupies a different situation, and in these cases an appendicular perforative process is sure to cause a deep-seated intraperitoneal abscess, more or less distant from the surface, hence infinitely more grave and dangerous both as regards its deleterious possibilities and the difficulty of diagnosis and surgical management. As soon as it became clear that widely different intraperitoneal forms of suppuration might be caused by extension from the appendix, and that their manner of development was wholly unforeseen and unaccountable, a violent oscillation in therapy was initiated by those who proposed, in all cases where the appendix was suspected of causing trouble, a bold exploration by abdominal section, and the extirpation of the appendix, or evacuation at all hazards of the purulent collection, wherever it might be found, and all this without delay.

Though this bold course of therapy has, in spite of its experimental character, yielded very good results in the hands of various surgeons, and although its adoption was absolutely necessary for establishing a clearer understanding of the nature of the morbid process in question, nevertheless it must be remembered that a vast proportion of perityphlitic abscesses do not need operative invasion of the free peritoneal cavity for their successful cure, and a sweeping advice to the general profession to open the peritoneum in every case where appendicular trouble is suspected is, for obvious reasons, fraught with much unwarrantable danger.

Formerly it was considered purely accidental whether an intraperitoneal abscess would appear here or there, and the variability of the surroundings and location of these abscesses was deemed so irregular and erratic that, to the author's knowledge, no attempt was ever made to study the question whether a certain order of development did not prevail even in those forms of perityphlitic abscess which could not be classed with the well-known inguinal type described by Parker. If some light could be thrown upon the detailed nature of these seemingly erratic forms of circumappendicular abscess, instead of the crude general advice to "laparotomy," more precise, hence safer, methods of treatment would suggest themselves.

Let us first emphasize the fact that all intraperitoneal abscesses are of visceral origin, and that perityphlitic abscess in particular is due to inflammatory process located

in the vermiform appendix. Though not always, this form of abscess is mostly established within the peritoneal sac.

The proof of this assertion has been so manifold that it is only necessary to refer to the numerous cases of early appendicitis reported by McBurney and other observers, in which, on laparotomy, the free appendix was found to be tightly distended by a copious exudate, and more or less erect by dint of its extreme distention; its walls thickened, hyperæmic, occasionally exhibiting unmistakable signs of circumscribed necrosis with perforation imminent. This distention was uniformly produced by occlusion toward the gut. Occasionally decay had progressed to actual perforation of ancipient abscess, surrounded by a protective barrier of recent adhesions of the vicinal serous surfaces. The appendix was invariably found to be the starting-point of the trouble, and the affection, with rare exceptions, always intraperitoneal. Aside from the numerous instances in which the intraperitoneal and appendicular character of perityphlitis was established by positive observation, the following case may serve to show that the retroperitoneal space back of the iliac fossa is not the seat of abscess in typical cases of perityphlitis. In the spring of 1887 Dr. Lellman, then on duty in the German Hospital, requested the author to operate on a case of perityphlitis pertaining to his service. The operation was delayed twenty-four hours on account of a misunderstanding, and the next day—a dense, painful tumor found in the right iliac region—incision according to Parker was done, in spite of the circumstance that the size of the swelling had somewhat diminished since the previous day. The peritoneal lining of the iliac fossa was easily stripped up two inches beyond the external iliac vessels, so that the tumor was freely raised with it from the underlying tissues. No sign of inflammation was found, and, as the case was mending, it was not deemed prudent to incise the peritoneum. The very deep wound was drained and closed, but no pus appeared. Simultaneously with the healing of the incision the tumor disappeared, and the man was discharged cured within a fortnight after the operation.

We need not do more than hint at the causes of appendicular inflammation. Let us first mention the impaction of foreign bodies entering from the gut, acute or chronic forms of catarrhal or ulcerative (typhoid) enteritis, transmitted from the colon and leading to simple hypertrophy

or to ulceration, both of these causing irregular contraction mostly in the vicinity of the attachment of the appendix. Another not infrequent cause of stenosis is the doubling upon itself and fixation of the appendix in this position. Stenosis by flexion is thus produced (*F. W. Murray, N. Y. Med. Jour.*, May 24, 1890, p. 564). With the establishment of hypertrophy and stenosis a loss of contractile power is associated, leading to more or less complete retention and to the inspissation of faecal matter, which finally assumes the shape of one or more globular concrements. As long as the communication with the colon is fairly open, no local symptoms need prevail. As soon as the stenosis becomes considerable, the well-known signs of appendicitis make their appearance. If they are due to a passing state of catarrhal hyperæmia, their acuteness will vary in proportion with the intensity of the stenosis. Thus, with the cessation of causal intumescence and the elimination of the stenosis maintained by it, all trouble may seemingly or really disappear. A case reported by Shrady aptly illustrates this train of symptoms:

A physician had had four distinct attacks of appendicitis, in all of which the question of operation arose. Dr. Shrady had seen the patient at New York in three of the attacks, all of which were well pronounced, while the fourth occurred in Paris, where the patient was seen by a distinguished surgeon, who made a like diagnosis. There also the question of an operation came up. Each attack was attended with all the usual severe symptoms which would appear to usher in the formation of an abscess; there was dullness, tenderness, more or less rigidity, and some oedema in the neighborhood of the cæcum. In each attack the advisability of operation was freely discussed. The patient was willing to take the risks, but in each instance the symptoms gradually disappeared, and he recovered. He asked Dr. Shrady, should he survive him, to examine his appendix, which was done when death occurred, some time subsequently, of another cause. The appendix was found perfectly sound. There was not the slightest appearance of any inflammation around it; it was not even thickened. Where ulcerative processes have led to the formation of a permanent cicatrical contraction, the appendical trouble is apt to persist even after the cessation of causal disorder of the intestine. Passing states of local intumescence are then more likely to lead to complete occlusion of the communication between

gut and appendix, with serious consequences. But even in these cases temporary improvements are possible with the diminution of the acute swelling of the cicatricial mass.

Before attempting a practical classification of the phases of appendicitis and of the localities in which circumappendicular suppuration is to be observed, this fact has to be pointed out: that, unfortunately, the acuteness or mildness of the local or general symptoms is not an invariable index of the ultimate gravity of a given case. Sometimes fatal cases will set in with a very deceptive mildness of appearances. On the other hand, a very alarming beginning may be followed by resolution or a tractable state of affairs. Hence it must be insisted on that in reference to this trouble, all therapeutic advice has only a conditional value—to be weighed and accepted or rejected by the surgeon in each separate case.

ACUTE APPENDICITIS (WITHOUT TUMOR).

(a) Simple Appendicitis (No Tumor).—Anatomy teaches that in the supine body the attachment of the vermiform appendix can be found directly underneath a point located two inches from the anterior superior spine of the ilium, on a line connecting this bony prominence with the navel. Whenever acute and persistent pain appears in this region, accompanied by fever and retching, the pain being markedly increased by palpation of this area, trouble of the appendix can be confidently diagnosticated. In women, bimanual palpation ought to exclude the presence of an inflammatory process of the displaced uterine appendages. Though the local and general symptoms may be very alarming, tumor can rarely, if ever, be detected in the early stages of the affection. Meteorism is also absent.

In view of the impossibility of foretelling whether, in a given case, spontaneous evacuation of the contents of the appendix or perforation is to take place, and in the latter case whether a superficial or a deep-seated abscess is to develop; and, considering the fact that laparotomy followed by excision of the appendix has yielded uniformly good results if done before the access of perforation, it is safe to follow McBurney's advice, which recommends laparotomy and removal of the appendix whenever severe symptoms persist and increase for more than forty-eight hours.

The steps of the operation are these: A longitudinal incision, four or five inches long, parallel with and just out-

side of the rectus muscle. Having opened the peritoneum, the appendix is found, which will be rendered easy by first ascertaining the location of the *caput coli*. The mesentery of the appendix is included in a double ligature of stout catgut and divided. Then the root of the appendix is secured by two ligatures, between which the viscous is cut. The mucous lining of the stump is either seared with the thermo-cautery, or, after careful disinfection, is touched with a few drops of perchloride-of-iron solution and dried off. Then the stump is dropped back and the external wound is closed.

Case.—Miss F. L.—, aged twenty, has had altogether sixteen or eighteen attacks of appendicitis within two years. Characteristic local pain, irregular fever with temperatures reaching 104° F., no tumor. Uterine appendages normal.

April 20, 1890.—Laparotomy. The free appendix is found very much thickened, its distal half distended and bent upon itself, containing a quantity of foetid serum. It was removed. Uninterrupted recovery.

(b) Perforative Appendicitis (No Tumor). Sudden increment and extension of the local pain followed by symptoms of collapse, such as profuse cold sweating, a thready pulse, anxious expression, pallor, frequent vomiting, and the appearance of meteorism, are indications that perforation and infection of the peritoneum have taken place. This rarely occurs before two or three days after the inception of the trouble. The violence of the symptoms will depend on these factors. If the extent of the perforation is small, and only a small quantity of the infectious contents of the appendix has made its way into the peritoneum, a limiting barrier of protective adhesions may be thrown about the infected area within an hour or so. In this case the alarming features of the case will somewhat subside and a tumor is apt to develop. If, on the other hand, the perforation is large or multiple, a considerable volume of infectious material will suddenly escape. Lively peristaltic action will widely distribute it, and more or less extensive local or, in the worst cases, general septic peritonitis will be established.

The absence of tumor in conjunction with very acute local and general symptoms represents an extremely grave combination of things, its meaning being a generalizing peritonitis. In these cases the prognosis is very doubtful, and it will be extremely difficult to save the patient, even

by the most resolute measures. If laparotomy is immediately done, the focus laid open, wiped out clean, the appendix removed, and the cavity packed and drained, some chances may still be present for the patient's recovery. But where, on account of delay, numerous and widely disseminated abscesses have established themselves in the more remote parts of the peritoneal cavity, the patient's death is nearly certain. Prolonged exposure, the impossibility of a sufficient evacuation and drainage of the foci which are found, finally the overlooking of distant foci located in the loins, in front and behind the liver, will sufficiently explain this fact.

Case I.—William Sachse, aged forty-eight, liquor-dealer, was treated since September, 1889, in the internal department of the German Hospital for alcoholic neuritis. No habitual constipation.

March 23, 1890.—Sudden chill. Temperature, 105°. Slight amygdalitis. No abdominal symptoms. The temperature remained high, although the patient's bowels were well purged with calomel on March 25th. Had a chill in the preceding night, another one in the afternoon, complaining the first time of belly-ache.

27th.—Pain well marked in ileo-cæcal region. Was transferred to surgical service.

Temperature, 104.4° F. Meteorism, intense pain in ileo-cæcal region, but no tumor and no dullness. Vomited only once.

Laparotomy at 3 P.M. McBurney's incision. Peritoneum filled with turbid serum. Omentum widely adherent and very much thickened and elongated vermiform appendix was found. On freeing this, a large, irregular abscess cavity was opened, which did not anywhere approach the parietes, and which was situated below and behind the cæcum, its walls being formed everywhere by intestines.

At the root of the appendix a large perforation was seen, with three globular faecal concrements lying in front of and outside of it.

The appendix contained three more globular concrements of the size of a small marble. The appendix was isolated, tied and cut off. Another large abscess situated in the median line, and a third one in Douglas's pouch, were opened, irrigated and drained.

Hasty partial closure of incision after packing and drainage of the abscesses on account of collapse. In the night

the temperature rose to 106° F., and the patient expired toward midnight.

Post-mortem examination revealed three more abscesses, one situated high up behind the liver.

Case II.—David Danziger, tailor, aged twenty-two. General peritonitis due to perforative appendical trouble of six days' duration. Laparotomy January 29, 1889, at Mt. Sinai Hospital. Seven abscesses were opened and drained. Patient seemingly improved, the quality of the pulse improving. Vomiting ceased, but he collapsed suddenly thirty hours after the operation and died. Post-mortem examination revealed three perihepatic abscesses.

ACUTE APPENDICITIS WITH TUMOR; PERITYPHLITIS; ABSCESS.

Whenever perforation of the free appendix occurs, the invasion of the peritoneum is regularly signalized by the usual symptoms of perforative peritonitis. As before mentioned, a circumvallation by adhesions will form in those cases in which only a small quantity of infectious material has escaped. This seems to be the usual course of events. Occasionally, however, the inflamed parts of the appendix will first become adherent, and then be perforated. In these cases the alarming intermezzo possessing the typical aspect of perforative peritonitis will be missed, and the abscess will develop without a tendency to meteorism and collapse, and with a gradual but steady growth of the mainly local symptoms. The complex of symptoms has little of the character pertaining to peritonitis, and resembles that of an ordinary abscess.

By contiguous extension, which is mostly slow, these abscesses may assume very large proportions. Neglected for a long time, especially if they are limited by intestines only, their secondary rupture, followed by a chill and further extension, or even their generalization, may occur. This, however, is not common in the early stages of the process. The only case of this kind observed by the author occurred nineteen days after the inception of the trouble.

Case.—H. D_____, clerk, aged twenty, subject to alvine sluggishness, contracted, after a more than usually severe spell of constipation, a deep-seated, hard, painful, perityphlitic swelling. Cathartics failed to relieve the bowels, and, high fever with vomiting having set in, the author was consulted.

May 1, 1878.—Typical swelling of a cylindrical shape was

made out in the right groin, and a number of repeated large injections of tepid water into the gut were employed without success.

3d.—The peritoneal symptoms, notably vomiting, became very distressing, wherefore this therapy was abandoned and opium treatment begun. At the same time an ice-bag was placed over the swelling. The change effected a decided improvement in the subjective symptoms, but the swelling continued to increase and the fever remained unrelieved.

17th.—Spontaneous evacuation of a large, formed stool occurred.

19th.—The general condition becoming very poor, incision was urged, but was firmly declined by patient and parents. Suddenly, in the night of the same day, perforative symptoms developed. The patient died, May 20th, of septic peritonitis. Post-mortem examination demonstrated an internal perforation of the abscess, and putrid septic peritonitis. Had the patient consented to the operation, the case might have turned out differently. Perforation took place on the nineteenth day after the invasion.

The presence of a tumor, which always indicates the existence of protective adhesions, implies a certain amount of temporary security, and, under certain circumstances, may justify a short delay of the operation.

TYPES OF ACUTE PERITYPHLITIC ABSCESS.

Although the classification of perityphlitic abscess according to location can not be made with geometrical precision, yet it will be found that most cases can be naturally massed in a series of roughly defined groups. The small number of intermediate or transitory forms does not vitiate the practical value of this grouping, upon the right understanding of which must be based some important variations of the operative technique.

It is the author's wish to firmly maintain the importance of the principle that every intraperitoneal abscess should, if possible, be opened and drained without invading the normal peritoneal cavity—that is, through existing planes of adhesion to the parietes. With few exceptions, all perityphlitic abscesses have such an approachable side. To study, to ascertain, and to utilize them is the duty of the conscientious surgeon. It is idle to state that safely incising and draining an abscess through a laparotomy wound—that

is, through the free peritoneal cavity—is an easy or indifferent matter. No competent person will believe it.

I. Ilio-inguinal Type (Willard Parker's abscess).—The normal situation of the caput coli and appendix vermiciformis near the parietes of the right iliac fossa has the consequence that the great majority of circumappendicular suppurative processes will naturally establish themselves so as to have for one of their limiting walls the parietal peritoneum of that region. This has led to the erroneous belief that perityphlitic abscess is normally located behind the peritoneal lining of the iliac fossa.

This situation involves the great practical advantage that the abscess can be permitted to assume certain proportions so as to render its incision simple and free from the danger of invading the normal peritoneal cavity. Therefore, when an immovable tumor develops in the right iliac fossa soon after the inception of the malady, it is safe to wait a few days until the abscess has assumed a certain size. On the fourth, fifth or sixth day it may be safely incised. Searching for pus with a hollow needle is superfluous when the abscess is superficial—that is, immediately beneath the parietes; dangerous if it is deep-seated, as the gut might be thus injured or the healthy peritoneum infected.

Case.—Francisca Bertrand, aged forty-five, was taken ill with fever early in July, 1882, and developed a deep-seated, painful swelling in the left iliac fossa, with high fever and peritonitis symptoms. On the afternoon of August 5th probatory puncture brought out some pus, wherefore, with the aid of the family physician, Dr. Assenheimer, incision was practiced by Hilton's method. A large quantity of pus escaped, and a drainage-tube and antiseptic dressing were applied. In the following night very acute peritonitis set in, to which the patient succumbed August 6th. No doubt the reflection of the peritoneum was injured, and part of the pus must have entered the peritoneal cavity.

The only safe way of opening these abscesses is by methodical and careful dissection, layer by layer being divided by an ample incision placed through the longer axis of the tumor. The vicinity of pus will become manifest by the discoloration and condensation of the tissues. When the abscess is open and the bulk of its contents has escaped, a gentle exploration by the index finger is advisable to detect recesses or a foreign body. But all rough treatment of the walls of the cavity by scraping, tearing or rude

squeezing is reprehensible, as it may lead to inward rupture. For the same reason search for and removal of the ulcerated or necrosed appendix from the abscess is to be avoided as unnecessary and dangerous. Two drainage-tubes are slipped into the cavity and fastened in the usual manner. They will facilitate irrigation without causing undue distention. A daily change of dressings will be required for the first week or ten days. As soon as the discharge becomes scanty and serous, the tube should be removed.

The ilio-inguinal type is undoubtedly and fortunately the most common form of perityphilitic abscesses, and its time-honored therapy as laid down by Parker will have to be retained as safe and successful.

In sixteen cases of the ilio-inguinal group operated on by the author according to Parker's plan, only one terminated fatally, by erysipelas. The patient was under treatment for hip-joint disease when, unfortunately, the complication with perityphilitic abscess set in.—*N. Y. Med. Jour.*

Treatment of Hemorrhoids by Excision.

BY CHARLES B. PENROSE, M.D.

Read to the Philadelphia County Medical Society, September 24, 1890.

My object in presenting this paper is to urge the more general use of Whitehead's operation of excision in the treatment of certain cases of hemorrhoids.

In 1887, Mr. Whitehead, of Manchester, reported three hundred consecutive cases of hemorrhoids which had been successfully treated by the method of excision and suture. His operation is performed in the following manner:

1. The patient is placed on a table in the lithotomy position, with the hips well elevated.
2. The anal sphincters are then thoroughly paralyzed by digital stretching.
3. The mucous membrane of the rectum is divided at its junction with the skin around the entire circumference of the bowel.
4. The mucous membrane, with the attached hemorrhoids, is dissected from the submucous tissue, and the cuff or cylinder thus formed is dragged below the skin margin.
5. The mucous membrane above the hemorrhoids is then divided transversely, thus removing the pile-bearing area,

and the operation is completed by suturing the upper margin of the severed membrane to the free margin of the skin.

The advantages claimed by Whitehead for this method of treatment are based on pathological and on surgical reasons. He considers that the internal hemorrhoids, which are generally regarded as localized distinct tumors, amenable to individual treatment, are, as a matter of fact, component parts of a diseased condition of the entire plexus of veins surrounding the lower rectum, each venous radicle being similarly, if not equally, affected by an initial cause, constitutional or mechanical.

The operation of excision is the only one which removes this whole diseased area. It is, therefore, demanded for this pathological reason. It is in addition surgically more perfect than any other method of treatment, because it provides for the readjustment of healthy tissues with the object of securing primary union and rapid convalescence. It does not leave the pain and slow convalescence of the ligature.

My experience with this operation is limited to ten selected cases. Only those cases were selected in which there existed a complete circle of hemorrhoidal tumors surrounding the lower margin of the rectum, since for such cases Whitehead's treatment of excision seems to be most particularly adapted.

The details of the operation are simple and easy to execute. In dividing the mucous membrane from the skin it is best to begin at the posterior margin of the anus in order to prevent the blood from obscuring the field of operation. No skin should be sacrificed, even though there appear to be redundant tags around the margin of the anus. The skin always retracts somewhat and the tags shrivel and disappear before firm union has taken place. Failure to observe this rule may result in subsequent serious trouble. Kelsey reports the case of a woman who had been subjected to a so-called Whitehead operation and who presented herself to him with a complete circle of excoriated mucous membrane, extending for one inch outside the anus. It is probable that in this case the operator had sacrificed too much skin.

On the other hand, the upper section of the mucous membrane should be made in the same horizontal plane throughout, in order to prevent subsequent ectropion ani.

The dissection of the mucous membrane from the under-

lying tissue is exceedingly easy except in some cases of old—or long standing—piles. The attachment of the submucous tissue is very loose, and separation can be effected with the finger or with the handle of the scalpel. It is not always possible to dissect the piles completely from the underlying structures, as they may involve not only the mucous but the submucous tissues, and in such cases it is necessary to cut partly through the piles until the healthy mucous membrane above is reached. Repeated attacks of inflammation of course render closer the adhesion of the pile area to the underlying structures. In one of my own cases, where the piles had existed for forty years, and had frequently been inflamed, the adhesions to the two sphincters were so close that a few muscular fibres were cut away during the removal.

The amount of blood lost during the operation is surprisingly small. Whitehead states that he has often operated on severe cases and not found it necessary to twist a single vessel. In five of my cases no haemostasis was necessary. Bleeding is avoided by adhering closely to mucous membrane in the dissection, as the larger arterioles lie beneath the submucous tissue. The arterial bleeding occurs in those cases of old piles which have been subjected to previous operation or to attacks of inflammation, and in which dilatation of the rectal and anal arteries has taken place secondary to dilatation of the hemorrhoidal veins. The bleeding from the upper divided edge of the mucous membrane can be reduced to a minimum by following Whitehead's method of inserting the sutures as each portion is divided, or by adopting Marcy's plan of introducing a circle of shoemaker stitches of catgut around the mucous membrane above the piles before cutting the mass away.

Whitehead's advice is in all cases to remove the complete cylinder of mucous membrane, whether or not the whole of this area appears to be diseased. He gives this advice for the reason which I have already stated, that he considers the individual piles as but part of a general pathological condition, involving all the lower hemorrhoidal veins of the rectum.

Whether we accept this pathological view or not, it is best to follow this plan, and to make a complete circular division of the mucous membrane, as by this method the best surgical results are obtained, and ectropion ani prevented. I have seen a case in which only one-half of the

circumference of the mucous membrane of the rectum was removed, and a few hours after the operation an oedematous swelling formed in the other half, which has now resulted in a hemorrhoidal tumor almost as annoying as the one for which the operation was performed.

In attaching the mucous membrane to the skin, Whitehead uses the interrupted silk suture. He never removes the sutures, but allows them to ulcerate through—a process which is very easily accomplished. In my own cases I have used the continuous catgut suture.

The treatment of these cases after operation is very simple. It is rarely necessary to use opium or the catheter. An opium and belladonna suppository introduced immediately after the operation, is in most cases all that is required. The bowels can be moved in from twenty-four hours to four days, and with very little pain. Absence of pain after Whitehead's operation is due to the thorough paralysis of the sphincters, and to the fact that no source of irritation is left beyond that of a clean linear incision, united without tension and without strangulation of tissue.

A glance at the histories of my own cases shows that they were all cases of aggravated hemorrhoids, in which the piles covered the whole circumference of the lower part of the rectum. In all the cases the disease had existed for many years, and two had been subjected to previous operation by the ligature.

In only one case was there anything like free bleeding during the operation.

In all the cases a suppository of one-half a grain of extract of opium and one-half grain of extract of belladonna was introduced immediately after the operation, and this was all the opium required except in three cases, in which one-sixth grain of morphine was subsequently administered.

The catheter was used in only three cases, and in these for a period not longer than twenty-four hours. The length of time that the case is confined to bed depends to a great degree upon the social standing and the disposition of the patient. In my cases it varied from two to ten days. Every case should be able to sit up in four or five days, and to resume work in ten days or two weeks.

The bowels were opened without pain in from twenty-four hours to four days after operation.

No complications of any kind followed these operations. Union takes place quickly, and generally one dressing, taken

off when the bowels are moved, is all that is necessary. In no case was there incontinence from paralysis of the sphincters, or any tendency to stricture, from contraction of the scar.

Since the publication of Whitehead's paper his method of operating has been tested by many surgeons. The operation can not be criticised on surgical grounds, as it is certainly the most perfect plan of treatment, surgically speaking, which has been proposed.

The immediate removal of the tumors, the coaptation of healthy tissues, and primary union, are substituted for slow strangulation by the ligature, or removal by the cautery and healing by granulation.

The applicability, or the necessity, of this operation in all cases of hemorrhoids, is, however, open to criticism. If we accept Whitehead's views in regard to the pathology of piles, and believe that the whole venous plexus surrounding the anus and the lower end of the rectum, is in a pathological condition in every case of hemorrhoids, even though there may be present only one or two isolated tumors; then, of course, the complete removal of this area is indicated.

But, that this view is not true is proved by the thousands of cases which have been permanently cured by the ligature and the clamp. The method, however, is indicated in all cases of aggravated hemorrhoids where the vascular tumors cover the whole or the greater part of the circumference of the bowel. In such cases the operation presents no great difficulties. Statistics show that it is at least as safe as operation by the ligature or the clamp, and it is certainly followed by a more rapid convalescence, and much less pain and discomfort.

DISCUSSION.

Dr. W. D. Green: I have had the pleasure of witnessing only a small number of Whitehead's operations, but I fully agree, and I think that those who have tried the operation will fully agree, with Dr. Penrose, that the method of excising, through the whole circumference of the bowel, the pile-bearing mucous membrane and drawing down upon the upper segment and then attaching this to the lower segment without including the skin, has the advantages, first, of removing all possibility of return of the trouble; and, sec-

ondly, as Dr. Penrose has stated, in making a clear, clean, linear incision around the circumference of the bowel.

Nearly all of us have seen the immense amount of suffering which the older operations by means of the clamp and ligatures, and even the cautery, have entailed. In the cases of the new operation which I have seen, recovery has been rapid and complete. In one case, that of a woman well advanced in life, upon the day after operation, when I got to the house, I found her comfortably seated in a rocking-chair.

The physician who had had the case in charge before the operation had given her freely of some medicine to open the bowels, and on the morning after the operation, without any pain and without any tenesmus, she had a large, well-formed motion. In the old method, in which for days the physician was called upon to administer opium, either by suppository or hypodermically, in large amounts, and in which the patient and the physician both looked forward with dread to the time—five, six or ten days after the operation—when the bowels were to be opened, is by this method entirely obviated.

I have seen, in the few cases which I have watched, no pocketing or trouble about the line of incision. The two freshly cut surfaces unite very quickly—very much more so, it seems to me, than in mucous surfaces elsewhere. Even when the bowels were moved within twenty-four hours or thirty-six hours, I was surprised to find that there was no trouble.

It strikes me that the continued suture has advantages over the interrupted. Being introduced and made fast at one point, and then carried out and in around the circumference of the bowel, if catgut be used at the time when union usually occurs the suture is probably dissolved and passes away without any trouble; or, if silk be used, by simply introducing the scissors and cutting close to the knot and giving an easy pull, the whole suture is removed without any pain or bleeding.

I must confess that the operation presents to me by far the best method of removing the pile-bearing membrane when it exists and involves one-half or more than one-half the membrane around the circumference of the bowel.—*Med. Progress.*

Extracts from Recent Issues of French Medical Journals.

Translated for the CINCINNATI MEDICAL NEWS, by E. A. Quetin,
Juge de Paix, Tonnerre, France.

Dr. Dujardin-Beaumetz, a member of the Academy of Medicine in Paris, has exposed in a masterly manner, at the Congress in Berlin, and again resumed lately in a conference to his medical students at the Hospital Cochin, the latest data of science in the treatment of diabetes. To do justice to that conference would require its entire translation, fifteen pages (*Bulletin*, August 15th), the right of which has been integrally reserved. We shall therefore be content with mentioning only some conclusions of the eminent doctor: he abandons any distinction between diabetes and glucosury (*Diabetes insipidus* and *D. Mellitus*), both being symptomatic of a variety of pathological conditions; the disease being one—especially in regard to treatment—slight or grave. Slight, if, by means of a dietetic alimentation, the sugar has completely disappeared from the urine, in about two weeks; grave, if, in spite of that diet, the sugar secreted in twenty-four hours has only been reduced in an insignificant proportion. In the last case, the basis of pharmaceutical prescription is the carbonate of lithia.

We find two new modes of treatment recommended in the *Bulletin*:

1. Treatment of diabetes by the solution of *hippurate* of lime.—Dr. V. Poulet, of Plancher-les-Mines, calls the attention to three cases he treated successfully with no more medication than three tablespoonfuls a day of basic solution of *hippurate* of lime, to which is added forty centigrammes of saccharine per litre. Each tablespoonful containing one gramme of active principle; this treatment being helped by the observance of the classical diet and Vichy water.

2. A case of *Diabetes Mellitus* (*diabète sucré*) rapidly cured by the subcutaneous injections of ergotina, without any modification in the alimentary regimen.—Dr. Laurens, of Mayesy (Landes), remarks upon the difficulty met by patients in submitting to a strict anti-diabetic diet: This difficulty, or rather impossibility, of keeping his country patient from their ordinary manner of alimentation, had brought him to desire the discovery of some therapeutic agent to cure glucosury, without changing much their regimen. He had noticed a communication made by Dr.

Dehenne, of Paris, to the Society of Medicine in Paris (March 13th, 1886), relating several cures obtained by means of injections of ergotina, and calling the attention of the profession upon this new method of treatment of diabetes. In January, 1890, he was called to treat a woman forty-five years old, suffering since 1888 with *diabetes mellitus*. The doctor says: "Prescription.—Change nothing in diet, take two or three glasses of Vichy water every twenty-four hours, and every morning subcutaneous injection of ergotina (solution of Tanret). February 18th. The injections at the dose of four drops were made regularly, increasing of one drop every other day, to stop at seven drops. The thirst and polyuria diminished little by little. On the 26th of February, the polydipsia had disappeared; the general health was excellent. The solution of ergotina being exhausted, the patient would not continue the injections. I recommended not to interrupt the alkaline drinks, which were continued until May 15th, last. The health is now excellent. I consider the cure as completed."

The *Revue Générale et Clinique et de Thérapeutique* (October 1st and 15th, 1890.) Croup—Pellicular Inflammations of the Throat—Tracheotomy.

Dr. Wins, of Valenciennes, writes that since 1887, they have practiced tracheotomy eleven times in cases of croup or diphtheria angina upon children varying between eleven months to nine years of age. No accident during the administration of chloroform. Results: Seven of the children died of broncho-pneumonia from the third to the sixth day after the operation; the four who recovered were three, six, seven and nine years old. The doctor pronounced these results satisfactory, admitting even that the circumstances were favorable.

Dr. Binet, of Vence (Alpes-Maritimes), writes to state a case of tardy transmission of croup to a child two years old, who was brought to a house, and died where, thirteen years before, one child of the same family had died of the same disease. The croupal germ remained latent for several years, and finally propagated under particular conditions.

In regard to all pellicular affections of the throat, several physicians have advocated lately, through various dailies, the use of sulphur (flowers of sulphur), one tablespoonful in a glass of water, mixed and taken at the dose of a spoonful at short intervals; also inhalation of the vapor of sulphur and turpentine burning in a vase, by the bedside of the

patient. Several cases were mentioned in which, through the effect of the aspiration of that vapor, the false membranes were expectorated, and the patients promptly relieved, after other medication had failed, and hope had been given up. Before burning the sulphur with turpentine, all the openings of the sick-room have to be hermetically closed. The room is soon filled with the vapor, which is said to be harmless for the bystanders.

The *Semaine Médicale* (Medical Weekly), October 29, 1890.—Treatment of Hemorrhoids by Application of Hot Water.

Dr. Alvin, of Saint-Etienne, prescribes, with advantage, hot water against the painful symptoms provoked by the turgescence of hemorrhoids (pain, itching, tenesmus, contraction of the anal sphincter): Three or four times a day, and especially after each defecation or attempt at defecation, the patient applies upon the anal region, a sponge provided with a handle, and saturated with hot water (50 to 60°). This application should be repeated five or six times at each sitting, until the patient experiences a lively burning feeling. The drying is performed with very thin linen cloth, avoiding friction.

After twenty-four hours, the sufferers feel greatly better. At the end of a few days of that treatment, the swelling becomes softer and more and more reduced. After one month, the tumors disappear almost completely, and the anal contraction has sensibly diminished.

Depopulation of France, or, more exactly, Feeble Increase of Population.

This question is one of actuality with the Academy of Medicine, as we see it treated at every meeting. September 30th: Dr. Lagneau makes a motion that unmarried men should be subjected to the payment of a tax. October 21st, Dr. Lagneau speaks of several measures proposed outside of the Academy: for instance, many have claimed that priests should marry. In the fifth century, although Sidoine Apollinaire was bishop of Clermont-Ferrand, he was also a husband and father, but it is so no longer. October 28th: Dr. Leon Le Fort says the feebleness of increase in the population depends upon the morals of the nation, and will not be checked by any amount of speeches. He advocates legislative measures, as, in the course of time, morals may be modified by the action of certain laws. The cause of the evil, says he, lies chiefly in our code of civic laws, which need many changes, and so forth. E. A. QUETIN.

Koch's Method.

The special correspondent of the *British Medical Journal* gives the following account of von Bergmann's, Levy's, Fräntzel's and Gerhardt's cases:

Dr. v. Bergmann's anxiously-expected address and exhibition of cases treated by Professor Koch's method took place on Sunday evening, November 16th, before a numerous and select audience of invited guests. The Minister of Public Instruction, Herr von Gossler, and amongst other celebrities Professors Virchow, Gerhardt, Liebreich, Waldeyer and Olshausen were present. In beginning his address Professor v. Bergmann referred in stirring words to the intense emotion which, since Kock's publication, had seized not only suffering but also healing humanity. He then discussed the cases that had come under his own observation, which were cases of (1) lupus, (2) glandular tuberculosis, (3) tuberculosis of the joints and bones, and (4) tuberculosis of the larynx. Five lupus patients were exhibited, to whom a subcutaneous injection of one centigramme of Koch's remedy had been given in the morning between 8:30 and 9:30; all these five cases showed the general and local symptoms spoken of by Kock—namely, fever and inflammation. The lecturer remarked that the unerring certainty with which an attack of fever, accompanied by rigors, followed the application of the remedy, was of the highest interest from a medical point of view. This general reaction was invariably accompanied by a marked action on all tuberculous parts of the body—visible in cases of lupus. Of the patients exhibited some showed temperatures of 41° C., and even higher. The lupus spots were enormously swollen and very red, this reaction being more marked in recent cases. One of the patients had suffered from the disease for twenty years and one for twenty-nine years. On Sunday morning, before the subcutaneous injection was given, Professor Gerhardt had designated the first of these as a slight and superficial one; nevertheless, an enormous reaction followed the injection, tending to prove that there was more lupus than had yet been found, and that Koch's remedy finds the most secret places and nests of tubercle bacilli.

The next five patients exhibited were treated in presence of the assembly by Stabsarzt Dr. Pfuhl, subcutaneous injections in varying doses being applied to the back. One of

the patients was a sickly-looking lad of seventeen, who had been under Professor v. Bergmann's and the late Professor Volkmann's treatment for the last fourteen years. "Now the poor fellow will have relief at last," said Professor v. Bergmann, smiling.

The next set of three patients exhibited had been under treatment for some time, and had gone through a course of subcutaneous injections, the reactions becoming weaker after each injection. Here partial cure was already visible; but the application will be continued until no reaction at all can be observed.

Professor v. Bergmann resumed his address by remarking that the value of the remedy was enhanced by the control experiments that could be made in the case of healthy subjects, or those affected by other diseases, which were all-important for diagnosis. He illustrated this by exhibiting a patient suffering from an affection of the cheek, which might have been considered tuberculous. The experimental subcutaneous injection produced no feverish reaction. Probably this case was syphilitic.

The second group exhibited contained two cases of glandular tubercle, in the person of two little girls of scrofulous appearance. Here the reaction was marked.

The third group comprised sixteen cases of tubercle of the joints and bones, with suppuration, fistulæ, and similar phenomena. Some of these, to whom a first injection had been applied, showed the usual symptoms; the joints were much swollen and highly colored, and movement was scarcely possible. Others had been treated by repeated injections. One of these, who suffered from consumption and tuberculous inflammation of the knee-joint, was so severely affected by the injections (intermittent pulse, faintness, etc.), that there seemed cause for anxiety. He had, however, recovered, and was progressing favorably.

The last patients exhibited excited special interest, as they were cases of tubercle of the larynx. Professors Gerhardt and von Ziemssen had in both cases found serious lesions of the larynx. And here the remedy showed its diagnostic value as a means of distinguishing cancer from tuberculosis.

In summing up the cases exhibited, Professor v. Bergmann said that from the local and general phenomena which had already shown themselves the prognosis was decidedly favorable. Nevertheless, in many cases surgical operations would still be unavoidable, as abscesses and dislocations

could be cured by mechanical means only. In these cases it would be of the highest importance to guard against relapse by the repetition of Koch's treatment, and thus both methods united gave the brightest prospect of success.

The *Therapeutische Monatshefte* publishes a supplement containing an account of cases treated by Koch's new method in Dr. Levy's clinic. The report, written by Dr. H. Fielchenfeld, Levy's assistant, is here summarized: The treatment was begun on September 22d; that is, not quite two months ago. This comparatively short time has sufficed to show in what cases complete recovery may be hoped for, and where only amelioration of symptoms can be expected. No definite opinion can be formed as to the length of time necessary for perfect recovery. Fielchenfeld cites three cases of lupus, one of which is a sort of test-case, and has already become celebrated in the history of the investigation. In this case all the phenomena of reaction took place in the typical form with which Koch's paper has made the world familiar. A complete cure seemed to have been effected—it was as though the diseased tissue had been cut away with a chisel. Further subcutaneous injections, however, proved that the end of the trouble had not been reached, and that in spite of superficial cicatrization there was considerable tuberculous tissue below awaiting destruction. Even now the patient can not be considered cured. In a second case of lupus the general condition of the patient became much worse after each subcutaneous injection, and severe pains persisted, especially in the bones of the affected arm.

A third case of lupus is interesting because, of all cases treated in Levy's clinic, it is the one furthest advanced toward recovery. In this case the subcutaneous injections no longer produce a reaction. Here, too, however, Dr. Fielchenfeld speaks of "provisional cure" only, as no final verdict can be given after two months in a disease which runs its course so slowly as tuberculosis does.

In cases of tuberculosis of the bones and joints, cures were effected; that is, no reaction followed the subcutaneous injection of even large doses. The same result was obtained in cases of glandular tuberculosis. Turning to his cases of consumption, Dr. Fielchenfeld states that three patients in the first stage of phthisis were dismissed as cured, their sputum having been found free from bacilli, and the

auscultatory signs having considerably decreased. Dr. Fielchenfeld, however, does not consider these two facts a complete proof of definite cure. Bacilli may disappear from the sputum to reappear after a time.

As regards the more advanced forms of phthisis, where cavities have already formed, Dr. Fielchenfeld remarks that no complete recovery has been observed. But the general symptoms of the disease—night-sweats, etc.—disappeared promptly. Even in the worst cases there was a diminution of expectoration. There was no increase of weight, even when the general condition was much improved. On the other hand, no loss of weight was observed, even in the most advanced and desperate cases.

At Monday's meeting of the Verein für innere Medicin, Professor Fräntzel gave an account of the cases treated in his clinic by Koch's method. He divided them into two classes: (1) Those in the first stage of phthisis; (2) those in advanced stages of the disease (disintegration of tissue, cavities, etc.). In the latter group no change of condition could be observed. Two patients died during treatment; their cases were desperate from the beginning. The *post-mortem* examination showed no indication of the commencement of recovery. Fräntzel utters a word of warning against using large doses at the beginning of treatment in advanced cases, and cited one case in which death ensued after twenty-four hours. As regards the first group of patients—early stages of consumption—Professor Fräntzel was able to record decided improvement. Expectoration was easier and more abundant after the injection, while the cough decreased. The general condition visibly improved; the appetite became keener, the weight increased, and the night-sweats disappeared. The microscopic examination of the sputum demonstrated first a decrease, and secondly a change of the bacilli. They seemed stunted; nevertheless, their vitality was not destroyed. Fräntzel is of opinion that the treatment, even in the most successful cases, must be continued for a considerable time to guard against relapse.

In a clinical lecture given in the presence of many distinguished physicians on Tuesday, November 18th, Professor Gerhardt gave an account of his experiences with Koch's remedy. He exhibited three cases specially fitted to illustrate the progress made in the diagnosis and treatment of tuberculosis. The first case was one of tuberculosis of the throat, in which various methods had been tried without

effect. On Sunday, two milligrammes of Koch's fluid were injected, and a decided reaction was observed on Monday. Considering the success which has attended a similar case in v. Bergmann's clinic, Professor Gerhardt thinks that recovery is possible. The second case was in the initial stage of consumption, whilst the third patient showed an affection of the apex of the lung which aroused suspicions of tuberculosis. Tubercle bacilli had not been found, but this is no absolute proof of the non-existence of tuberculosis. Koch's fluid was injected on Sunday; no reaction ensued, which is a conclusive proof that the affection is not tuberculous. Professor Gerhardt, in conclusion, spoke some serious words of warning. He said it was absurd to imagine that Koch's treatment was of so simple a character that by subcutaneous injection consumption could be simply driven out of the body; on the contrary, in order to apply it successfully, the physician would have to use the most careful discrimination.—*Phil. Med. News.*

Mic^roscopy.

Microscopical Laboratory Notes.

BY H. M. WHEPLEY, PH.G., F.R.M.S.

Read before the St. Louis Club of Microscopists.

DISSECTING KNIVES.—The delicate blades of small dissecting knives are liable to become injured, if the instruments are not carefully cared for when not in use. I find that a small piece of thick blotting paper can be slipped over the blade like a sheath to a sword. If the blade is dipped in vaselin before putting it away there is no danger from rust.

GOLD SIZE.—The works on microscopy give complicated and tedious methods for making gold size from linseed oil (*oleum lini*.). It is entirely unnecessary to follow them, as the article can be purchased from varnish dealers at fifty cents per pint. It is known as "gold size varnish." It costs more than this to make it by boiling linseed oil with litharge, or passing oxygen through the oil, as one ingenious writer suggests. Gold size can be used as a cement as it is, but I prefer to add about one-fourth the bulk of benzol to thin it, so that it flows more smoothly from the brush.

A VALUABLE LAMP.—I have tried numerous kinds of lamps to find the one most suitable for general use. The most serviceable one seems to be a Pinnefore burner and chimney on a large bracket bowl that is supplied with a handle and an opening for filling the lamp. When arranged with a large white shade the outfit costs but \$1.15 and is much more useful than the expensive student's lamps, or special ones made for microscopists. If the light is too low for some work, it can be easily raised by placing the lamp on a cigar box or blocks of wood.

BRUNSWICK BLACK.—Of late this cement has been made by replacing the oil of turpentine with benzol, which makes a smoother cement, and causes it to dry more quickly. It also makes it much more expensive. I find that the rectified oil of turpentine answers nearly the same purpose as the benzol and is not so expensive. It is also necessary to use the true Trinidad asphaltum, and not the ordinary kind that is made into street pavements. I make the cement by dissolving Trinidad asphaltum in rectified oil of turpentine until of the proper consistency, and then straining through muslin. To this add nut oil in the proportion of five minims to the fluid ounce of cement.

DO NOT WASTE ALCOHOL.—The alcohol used in washing sections, and many other operations, should not be thrown away, but placed in a bottle labeled "old alcohol," and used in the alcohol lamp for washing balsam off of slides, hardening animal specimens, and numerous other purposes which will suggest themselves.

ABSOLUTE ALCOHOL.—It is quite expensive to buy absolute alcohol for general use. I heat four ounces of sulphate of copper until it is thoroughly dried, and then add it to one pint of commercial alcohol, and shake the mixture thoroughly and let stand for a few hours. The salt takes up the water and turns blue. Alcohol treated in this manner answers most purposes where absolute alcohol is wanted. The same salt can be dried and used over again for another quantity of alcohol.

LABELING SLIDES.—Not every one stops to think how much more convenient it is to have the principal label on the left hand end of a slide. We naturally pick up a slide with our right hand and grasp it by the right hand end. This covers up the label on that end, so I make it a practice to place the label on the left hand end; or, if two labels are

to be used, I put the main one on this end and the less important one on the right.

ACACIA CEMENT.—I find that a useful cement for finishing off balsam mounts is made by dissolving acacia in water and precipitating it with alcohol, and thoroughly washing the precipitate with alcohol until only insoluble matter remains. Make a saturated aqueous solution of this. To one fluid ounce of the solution add four drachms of the C. P. hydrated aluminum, two fluid drachms of glycerin, and the same quantity of water, and then strain through muslin. This cement dries quickly and can be followed with a coating of any other cement desirable.

A CLEAN CLOTH.—It is customary to have an old silk handkerchief convenient for the purpose of wiping off objectives, cover glasses, slides, etc. It is also quite common to see this cloth left out in the dust and dirt. I keep the piece of old silk in a tight box, so that it is not gathering dust when not in use. When it becomes soiled it should be washed.

BALSAM BOTTLES.—The mouth of a balsam bottle is usually smeared with balsam, so that the pipette soon becomes dirty and sticky. In order to avoid this I bend a piece of wire in the form of a quadrilateral and about the size of the greatest dimensions of the inside of the bottle. When this is placed in position the upper end serves as a support to scrape off any superfluous balsam from the pipette. If carefully used, the lip of the bottle can be kept perfectly clean.

The Microscope in Pharmacy.

To THE intelligent, progressive pharmacist, the microscope is a necessity. The time is coming when the skilled pharmacist will be a practical microscopist also. If it were generally known how simple its manipulation, how inexpensive are the necessary reagents and instruments with which to prepare objects for examination, we think it would be more widely used. The microscope is absolutely essential to the intelligent practice of medicine, and equally so in the practice of pharmacy.

The acquirement of a moderate proficiency in the manipulation of the instrument, and the mounting of objects, may be easily obtained by any one who possesses ordinary intelligence, and will devote a little time to its study. Hence

to those who have no instrument we would say, get one; and to those who have one we would say, use it.

The graduates of first-class pharmaceutical schools will of course understand its use, and will not be liable to abandon or neglect an accomplishment of which they may well feel proud.

The pharmacist may detect frauds in his stock, determine crystalline deposits, examine sediments, etc.; when he acquires moderate skill in technique, he may analyze urine and other fluids for physicians, who are not disposed to use the instrument themselves. These are but a few of its practical uses. Should you tire of work in this line, choose another in which you may find recreation, pleasure and instruction for yourself and friends. With polarized light you will get beautiful effects from many objects, especially the crystals of salacine and other chemicals. You may observe the crystallization of chloride of sodium under the microscope by watching the evaporation of its solution.

The artificial manufacture of chemical crystals gives beautiful and permanent objects.

Your laboratory contains an inexhaustible field for research, discovery, study and amusement. If its limits are too narrow for your progressive mind, or you tire of its material, you may venture into other fields of research, simple or complex, as your taste may dictate. The ponds and ditches at all seasons afford a wide field for the study of curious animal or vegetable life, and they are always at your disposal. If you desire pecuniary profit and fame, you may diagnosticate the grape diseases for your neighboring vineyardist—find the Phyloxera, Alise, or the parasites Oidium, Anthracosis, etc. If you wish to advertise your business and draw custom to your store, place one of your best mounts under the microscope and put it on your counter or show-case, where all may take a look; it will please them, its novelty will amuse them, they will comment on your wisdom and skill and renew their confidence in your ability as a pharmacist, and praise the purity of the drugs you sell. So much for trade. Recount the advantages to yourself, the stimulation to exercise and research. A new life is opened to your view, a new sense developed in your being; you have a new world in which to live. The yellow dust in the heart of a flower, a drop of stagnant water, the window garden, the world, summer and winter, teem with invisible forms. A section of the pine needle is

more beautiful than the finest lace ; the one-thousandth part of a grain of quinine, than the flower on canvas ; a few grains of sand, than the costly gems of a regal crown.—*W. N. Sherman, M.D., in Pacific Druggist.*

Gleanings.

EHRLICH'S TEST FOR TYPHOID FEVER.—Make two solutions, one consisting of seventy-two minims hydrochloric acid and ten grains sulphuric acid in three ounces distilled water ; the other, a freshly-prepared one-half per cent. solution of sodic nitrite in distilled water. To twenty-six parts of urine from a typhoid fever patient, add twenty-five parts solution one, and one part of solution two, and the mixture is rendered alkaline by addition of ammonia. A bright orange-red color appears.

WOUNDS OF THE LUNG.—It seems to the writer that we have, in the case of gun-shot wounds of the lung, a condition closely analogous to similar wounds of the abdomen ; we have the same dangers to meet and overcome, modified merely by peculiarity ; our means of meeting these dangers are more direct in the case of the abdominal wound than in the pulmonary, but nevertheless, we have such means in the free incision and drainage as above proposed ; therefore we are, from a surgical standpoint, justified in employing this procedure, and it is the firm belief of the writer that, if used, we may look forward hopefully to the result, and that the prognosis in such cases will be much bettered thereby.—*Axford, in Med. Standard.*

EXERCISE IN PELVIC DISEASES OF WOMEN.—Kellogg, in the *Medical News*, thus advertises his sanitarium :

The propositions which I shall undertake to maintain in this paper are the following :

1. That defective muscular development is a prime factor in the etiology of a large number of the pelvic disorders to which civilized women are subject.
2. That the mode of dress common among civilized women is a cause of deficient and asymmetrical muscular development.
3. That the dress commonly worn by civilized women is productive of such disturbances of the relations and functions of the abdominal and pelvic viscera as directly lead to

the production of functional and structural changes in the uterus and its appendages.

4. That properly-graduated exercises, with adjustment of the clothing that will permit free and unrestricted movements of every group of muscles in the body, are of great importance in the management of a large class of pelvic disorders.

Book Notices.

THE MEDICAL STUDENTS' MANUAL OF CHEMISTRY. By R. A. Witthaus, A.M., M.D., Professor of Chemistry and Physics in the University of the City of New York; Professor of Chemistry and Toxicology in the University of Vermont, etc. Third Edition. 8vo. Pp. 528. Cloth. New York: William Wood & Co.

This work has been prepared for medical students. The author understanding the wants of such, being a teacher in a medical college, has written this treatise especially for them. While the science of chemistry, as set forth, is the same, of course, as is taught in other works prepared to instruct those in the mysteries of the science who are studying it without reference to their future calling, yet students of medicine require something in addition. They need to be taught chemistry as it relates to medicine. They must be taught what remedies are compatible with one another and what are not, what agents are regarded as poisons and what are antidotes when poisons have been taken, etc. Physicians have to do with chemistry with nearly every prescription they write, and, therefore, in learning the science, they should have, not a common school text-book put in their hands, but a work especially prepared for them.

BACTERIOLOGICAL TECHNOLOGY FOR PHYSICIANS. With Seventy-two Figures in the Text. By Dr. C. J. Salomansen. Authorized Translation from the Second Revised Danish Edition by William Trelease. 8vo. Pp. 162. Cloth. New York: William Wood & Co.
The title of this work explains its scope.

It has been the object of the author to prepare an outline adapted to bacteriological courses for physicians, and a guide for those who are obliged to take up the subject at home without the assistance of an instructor, yet wish to carry out for themselves the fundamental experiments which are most

important for pathology and hygiene. There will be found described the simplest and most easily managed apparatus and methods, so that the equipment of a home laboratory need not be very expensive.

Methods of staining bacteria in fluids and dried in the cover-glass are explained. Also how to prepare sputa and lung integument to exhibit bacilli tuberculosis, etc. It will be found an excellent work for those engaged in microscopical work.

A HAND-BOOK ON DISEASES OF THE EYE AND THEIR TREATMENT. By Henry R. Swanzy, A.M., M.B., F. R. C. S. I., Surgeon to the National Eye and Ear Infirmary; Ophthalmic Surgeon to the Adelaide Hospital, Dublin, etc. Third Edition. With Illustrations. Cloth. 12mo. Pp. 508. Philadelphia: T. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$3.00.

This is a work upon diseases of the eye well adapted to the wants of students of medicine and practitioners. While it is not so full and minute in details as some of the very large works which have been prepared for the use of specialists or experts, yet it treats of the various eye affections in a clear manner, presenting all the facts necessary for an intelligent understanding of them.

The first three chapters—Chapters I., II. and III.—are devoted to the elucidation of the philosophical principles involved in optics, showing how the eye acts as an optical instrument, and to the describing of ophthalmic instruments, as the ophthalmoscope, spectacles, etc. No one can become a scientific ophthalmologist who does not understand fully and clearly the principles set forth in these chapters, which are explained with great clearness.

The work has now reached a third edition. The second edition was published in 1888, and although but a little more than two years has elapsed since its appearance, yet so active was the demand for it that the work has been out of print for more than six months.

The third edition has been very considerably improved, besides having been brought fully abreast of the times. Various chapters have been rearranged. The value of certain eye-symptoms in the localization of focal cerebral disease has received much more attention than in either of the previous editions. Several new illustrations have been added.

THE MODERN TREATMENT OF HEADACHES. By Allan McLane Hamilton, M.D. 12mo. Pp. 122. Paper. Detroit: Geo. S. Davis. Price, 25 cents.

This little work is No. 6 of the Physicians' Leisure Library. We have frequently noticed issues of this series of medical works.

The author says that in writing this work he has drawn from his own experience, without any great reference to other articles or books, and the remedies are those in which he believes.

We copy the following as of general interest in regard to headaches: "As I have said, the most important pathological states which are conducive to headache are those which bear relation to the condition of fullness or emptiness of the cerebral vessels. As one-fifth of all the blood in the body goes to the head, we may expect to find important disturbances in function when the amount is either greatly increased or modified. As results of cardiac excitement or disease, increased vascular tension, determinations or hyperemic states of other organs, or exhausting fluxes, we find varieties of headache which are known as *congestive* or *anemic*, though their distinction is by no means an arbitrary one. Certain toxic headaches belong to the first order, and neurasthenic ones to the latter. Anemic headaches are often 'uterine,' and if we mingle the clinical and pathological terms we find ourselves in a helpless tangle."

Dr. Hamilton makes the following division of headaches: 1. Congestive; 2. Anemic; 3. Organic (as a rule due to structural cerebral changes); 4. Toxic (*e. g.*, lithemic, uremic, malarial, *et al.*); 5. Neuralgic; 6. Neurasthenic.

THE PHYSICIAN'S VISITING LIST. (Lindsay & Blakiston.) For 1890. Fortieth Year of its Publication. Philadelphia: Blakiston, Son & Co. Leather. Price, \$1.00.

This well-known Visiting List has now reached its fortieth annual edition. It was the first Visiting List issued in this country; and, although there are many similar works published by different publishing-houses, it continues to maintain its popularity.

The volume on our table is for twenty-five patients per day or week. Other styles of the same work are for fifty, seventy-five and one hundred patients per day or week. Besides the pages for keeping accounts of visits to patients

for each day of the year, there are pages for miscellaneous memoranda for each month, addresses of patients and others, obstetric engagements, obstetric cases, vaccination engagements, cash accounts, etc.

Though the capacity of the work is great, yet it is so thin and light it is easily carried in a side pocket of the coat. There is a pocket at the end, of the length and breadth of the book, for carrying prescription paper, etc.

THE MEDICAL BULLETIN VISITING LIST, OR PHYSICIAN'S CALL RECORD. Arranged Upon an Original and Weekly Plan for the Daily Recording of Professional Visits. New Edition. Philadelphia: F. A. Davis. Leather. Price, \$1.25.

This Visiting List is arranged upon a new plan, and embraces a new feature peculiar to itself, consisting of stub or half leaves in the form of inserts, by which it is shown that as the first week's record of visits is completed the next week's record may be made by simply turning over the stub-leaf, without the necessity of rewriting the patients' names. This is done until the month is completed, and the physician has kept his record just as complete in every detail of visit, charge, credit, etc., and has saved himself the time and labor required in transferring names every week. There are no intricate rulings; everything is easily and quickly understood, and comprehended at a glance.

The publisher issues three styles. No. 1 provides ample space for the daily record of seventy different names each month for a year, two full pages, thirty-five names to a page, being allowed to each month. No. 2 provides space for the daily record of 105 names for a year. No. 3 is peculiar in having the blanks for the recording of visits made in removable sections. The prices for Nos. 2 and 3 are respectively \$1.50 and \$1.75.

WEEKLY MEDICAL REVIEW, POCKET REFERENCE BOOK AND VISITING LIST. Perpetual. Leather. St. Louis: J. H. Chambers & Co. Price, \$1.00.

This is a convenient Visiting List arranged for recording visits to twenty-five different persons each week for a year. It can be begun to be used at any time of any year. It has the usual blank leaves for memoranda of different kinds, as obstetric record, death record, cash accounts, etc.

Editorial.

KOCH'S BACILLUS.—Dr. G. A. Heron, F.R.C.P., of London, has written a work, just published by the Longmans, entitled "Evidences of the Communicability of Consumption." He takes the ground that it is fully established that without the bacillus there can be no tubercle; and that the bacillus must always be introduced into the body from some external source. The evidence in favor of these positions may be summarized by saying that in every case of tubercle, in whatever animal or in whatever organ, the bacillus has been found when properly searched for, that it has never been found in non-tuberculous diseases; and that tubercle can be produced, with unfailing certainty, by inoculating with the bacillus alone, when freed by cultivation from any other possible product or associate of tuberculous disease.

Assuming, then, that the bacillus is the sole cause of consumption, as well as all other tuberculous diseases; and remembering that consumption alone is the cause of from one-fifth to one-seventh of the mortality of the world, the question how the diffusion of the bacillus can be arrested becomes one of primary importance to the human race. The chief sources of this diffusion, as far as they are at present known, are the expectoration of consumptive patients, and the flesh and milk of tuberculous animals.

In nearly all forms of tuberculous disease except consumption, in tubercle of the bones, of the joints, of the glands, or even of the skin, the bacilli are, nearly or even completely, imprisoned within the tissues which they affect; but in a tubercle of the lungs they speedily find a way to the air passages, and are expectorated in prodigious numbers. The expectoration of consumptives, even after it has been suffered to dry, without any precautions, and when it is many days old, will produce virulent forms of tubercle in animals that are either inoculated with it or fed with it. Dr. Heron has collected several instances of persons in attendance on consumptives, in whom inoculation of abrasions on the hands has occurred with very serious results; and there seems to be no reasonable doubt that the random expectoration of consumptive patients upon handkerchiefs, in rooms or in the streets, constitutes a grave source of danger alike to mankind and to animals. It is evident, Dr. Heron

thinks, that the expectoration, loaded as it is with bacilli, should be regarded much in the same light as the peeling cuticle of scarlatina, or the dejections of cholera or typhoid; and that it should be made the subject of precautions. The risk is one, he says, which the patients and their friends ought alike to be able to appreciate; and in the face of the facts established, neglect of care can hardly be described as other than criminal.

With regard to the flesh and milk of tuberculous animals, Dr. Heron adduces experimental proofs of the transmission of disease by either, and also shows the error of the prevalent belief that tubercle, in relation to its infective properties, can ever be correctly described as "localized" in such a sense that the affected portions of a carcass can be cut away, so as to leave only what is wholesome. He shows that bacilli enter the general blood current from even small infected parts; and that, for example, they have been found in the milk of cows affected with tubercle only in the lungs. He dwells upon the well-ascertained immunity from tuberculosis of carefully conforming Jews, whose meat is inspected in a manner which would require the rejection of the entire carcass if any speck of tubercle were discovered; and he quotes the following remarkable scrap of evidence:

"A very suggestive contribution to the study of this question of the carriage of infection by means of the flesh of tubercular cattle was made some years ago by the authorities of Baden-Baden. They published a sort of map, which showed that where cattle suffered much from tuberculosis the human population also suffered much from that disease. A remarkable observation is recorded in the map, and it is to the effect that where butchers who deal in cheap meat are numerous, there tuberculosis is exceptionally prevalent amongst the people.

"Now it is well known that about ten years ago, when the Baden-Baden authorities issued the map referred to, a very considerable trade was carried on in the sale of the carcasses of tubercular cattle for human food. The trade was largely in the hands of those butchers who sold cheap meat; and so we have a remarkable series of facts which points, it seems to me, unmistakably to the conclusion that the tubercular cheap meat, and the unusual prevalence of tuberculosis amongst those who fed upon it, bore to each other the relationship of cause and effect. This map re-

ferred to fifty-two towns, and was, therefore, the outcome of pretty extensive observation."

In another place Dr. Heron says there is evidence for the belief that about four per cent. of the animals slaughtered for food in Great Britain are more or less affected by tuberculosis, and are, therefore, more or less sources of danger to those who consume them. The danger may be reduced to a minimum by effectual cooking; but in underdone flesh, the bacilli have been proved experimentally to retain their vitality. There is probably no room for doubting that a complete sacrifice of the infected animals, such as would be required by the law and practice of the Jews, or even in some Gentile communities in which an inspection of meat is rigidly enforced, would, by the diminution of disease which it would bring about, become a distinct source of saving the lives of many people and increasing proportionately the average duration of human life. Besides, it would accomplish a little in the way of stamping out consumption.

From what has been learned in regard to consumption by observation and investigation during the last ten years, there is no doubt but that, by the rigid enforcement of sanitary laws, such having been enacted in accordance with the knowledge of the present time, tubercular affections, including consumption, can be entirely stamped out.

FURTHER INFORMATION IN REGARD TO KOCH'S TREATMENT OF TUBERCULOSIS.—Sir Joseph Lister has recently returned to London from a visit to Berlin, where he had the opportunity of witnessing the action of Koch's treatment of tuberculosis; and in King's College Hospital he related his impressions in regard to it. The *Lancet* says that he spoke of the effects produced by this treatment upon tubercular disease as simply astounding, both in its curative effect and its diagnostic value. He combated the statement which had appeared from time to time in certain publications, to the effect that it was impossible for the dead portions of tissue resulting from the treatment to be got rid of by other than surgical means. He stated that provided these portions of tissue were preserved from septic agency they need not necessarily be separated from the living body, as they were eliminated by absorption in the same manner as a catgut ligature. There was no reason to suppose that the fact of this tubercular tissue being destroyed would make it in-

capable of absorption. He compared the action of Koch's fluid with that used by Pasteur in the case of anthrax, an injection of which gave complete immunity from this disease, and he hoped that Koch's future researches would result in showing the remedy capable of acting on human beings so as to give them complete immunity from tuberculosis.

There was another line of research from which he hoped for good results in the direction of immunity. Through the kindness of Professor Koch he had the opportunity of visiting the Hygienic Institute of Berlin, and of seeing most beautiful researches being carried on in that institution, of which he was the inspiring genius. Those researches were now going on, and fresh facts were accumulating day by day. They had not yet been published, and he was not at liberty to mention any details, but there could be no harm in saying that he saw, in the case of two of the most virulent infectious diseases to which man is liable, that the injection under the skin of a small quantity of a material, perfectly constant in character—an inorganic chemical substance as easily obtained as any other article in the *materia medica*—cut short these two formidable diseases in the animals in which they were performed. These same animals were rendered incapable of taking the disease under the test of the most potent inoculations. He suspected that before many weeks were passed, if it should be found that the same results could be produced on man—though experience of what was known of the different behavior of Koch's fluid in guinea-pigs and in man makes this a matter of uncertainty until tested by experiment—the world would be startled by the magnificence of these researches, which would be recognized on every hand.

Dr. G. A. Heron, physician to the hospital, in a lecture given at the City of London Hospital (*Lancet*, December 6th), says that Koch's remedy is a transparent, reddish-brown fluid, not unlike brown sherry in appearance. It has no sediment, and when undiluted does not readily decompose. When diluted with distilled water it is, on the contrary, apt to decompose. Bacterial growths quickly appear in it, and it becomes turbid. In this condition it is unfit for use. Its decomposition in dilution is prevented by boiling it, but that process is not necessary if the dilution be made with a half per cent. solution of carbolic acid in distilled water. It should be remembered that both by the

frequent boiling of the dilution, as well as by the mixing of it with carbolic acid in the way described, the vigor of action of the remedy is impaired, and therefore fresh dilutions ought only to be used. Experience has, however, shown, he says, that a one per cent. dilution of the remedy made with distilled water, containing half per cent. of carbolic acid, remains efficient at the end of one week. The remedy is introduced into the body subcutaneously by means of a syringe which Koch devised for his bacteriological work. It has no piston or washes, and consists of four parts—an India-rubber ball, with a small hole in it. This ball is fixed upon a hollow metal stem, furnished with a stopcock; into the other end of the metal stem there fits a glass tube, pointed at the further end, and graduated to 1 cc., each division representing a milligramme. Upon the pointed end on the glass tube there fits a hollow needle. In using this syringe the glass tube, with the needle affixed, is detached from the metal stem and filled with absolute alcohol. The metal stem and ball are then replaced in position, and the alcohol gently expelled. Every day before using the syringe Dr. Heron says that he thinks it well to disinfect the metal stem and the India-rubber ball. Alcohol, however, causes cloudiness in the dilutions of the remedy, and therefore it is necessary to get rid of it as much as possible. For that purpose he washes out the syringe with a little distilled water.

The dose of the remedy has been sufficiently well fixed, says Dr. Heron, for all practical purposes. In a healthy man 0.25 cc. produces an intense effect. Koch thus describes the symptoms produced by that dose on himself, after it had been injected into his upper arm: "Three to four hours after the injection there came on pain in the limbs, fatigue, inclination to cough, difficulty in breathing, which speedily increased. In the fifth hour an unusually violent attack of shivering followed, which lasted almost an hour. At the same time there were sickness, vomiting, and rise of body temperature up to 39.6° C. (103.3° F.). After twelve hours all these symptoms abated; the temperature fell until next day it was normal, and a feeling of fatigue and pain in the limbs continued for a few days, and for exactly the same period of time the site of injection remained slightly painful and red."

1 cc. of a 1 per cent. solution—that is to say, a dose of 0.01 cc. of the remedy—is the smallest dose which affects

healthy adults, and the symptoms, more or less marked, following its administration are, in the majority of cases, slight pain in the limbs and a sense of transient fatigue. Only a few persons after this dose show a rise of temperature up to not more than about 100° F. The word "reaction" is used to indicate the symptoms, mild or severe, which follow upon the use of the remedy. In non-tuberculous adults there is no real reaction consequent upon the administration of any dose of the remedy less in amount than 0.01 cc.; therefore, the presence of reaction in the adult after a dose of less than 0.01 cc. of the remedy shows the presence of tubercle in the patient. If in the adult no reaction were obtained by any dose short of 0.01 cc., then it would be certain that the case in question was not one of tuberculosis. This is a law to which no exception has hitherto been found, and it gives the remedy great diagnostic value, which, it seems likely, will be one of its most useful clinical applications. The law applies to both man and beast, and to all tubercular conditions. Already cases have occurred in which the presence of tuberculosis was not even suspected, until the remedy was injected and reaction followed.

DECEASE OF DRs. BENJAMIN F. RICHARDSON AND JOHN DAVIS.—Since the previous issue of the MEDICAL NEWS two eminent physicians have died—Dr. B. F. Richardson and Dr. John Davis. Both of these gentlemen were old practitioners of medicine and had attained to high positions in the medical profession.

Dr. Richardson, at the time of his decease, was seventy-three years old. He was born in Columbiana County, Ohio, in the year 1817. At what institution he was educated we can not call to mind. He was recognized, however, as a man of education, and of extensive and varied acquirements. He pursued his medical studies at Starling Medical College, Columbus, receiving his degree of M. D. in 1848.

Immediately after receiving his medical diploma he came to Cincinnati and entered upon the practice of medicine. Possessing a fine physique, dignified in his bearing, highly intelligent, an excellent conversationalist, and cultured in his manners, he soon obtained a large practice, and was regarded a very popular practitioner, numbering among his patrons not a few of the wealthy families of the city. There is no doubt but that if he had been more energetic in *pushing*

his business he would have obtained a practice which, in size and pecuniary value, would have been second to no other regular practitioner in Cincinnati who competed for business during the time he was in regular business. But politics, to which he was disposed to give some attention, though we believe he was never a candidate for office, and other circumstances, tended to detract from his success.

As an obstetrician and as a diagnostician in diseases of children, as well as in the treatment of the affections of children, Dr. Richardson was regarded as an authority. His professional contemporaries not unfrequently consulted him in these medical departments, in which he was esteemed as especially skilled, and did not consider that by so doing they would lessen their own standing as competent physicians.

In the *old* Miami Medical College Dr. Richardson lectured upon obstetrics and diseases of women and children. While thus engaged in 1856, when we were a student, we became acquainted with him. We remember well his popularity among the students, who regarded him as an excellent lecturer and a superior instructor. He was afterwards elected to the chair of Diseases of Women and Children in the Medical College of Ohio, and held a high standing in the Faculty. When the Miami Medical College was reorganized he became one of the incorporators, and filled the same chair that he had filled in the Medical College of Ohio for several years. During the last ten years of his life, as he did not enjoy good health, he retired from active practice and passed his time with his family, residing in Avondale, a suburb of Cincinnati.

* * * * *

Dr. John Davis was born near Cincinnati—Butler County, Ohio—January 4, 1821. He was, consequently, at his decease, nearly seventy years old, although in appearance he was considerably younger. He was of slight build, being of less than average stature and weight, weighing not more than 120 pounds.

Dr. Davis' death was such, as it seems to us, any good man would wish to experience, after having lived his threescore years and ten, before a single mental faculty had become impaired by age—quick and painless—a translation as it were from this life to another. In fact, Dr. Davis' transition from life can hardly be called dying, so quietly, so painlessly he passed away. He was not sick a moment. He had spent Christmas Day at home, with his family and a few

friends, enjoying the festivities with the same spirit as the others. At about 8½ o'clock in the evening, being observed to be in a faint without having made a complaint, though apparently conscious, he was laid upon a bed and immediately expired. The cause of death was said to have been heart failure. Was it not rather merely the soul leaving the body, having made it its abode the full length of years? Should not Dr. Davis' manner of "death" be coveted by every good man when he has lived the number of years allotted him by Providence? Who wishes to live so long as to become a child again before he dies, and to be remembered as such after death? Or who desires to endure the sufferings of disease for days or weeks previous to his demise as a preparation for it, distressing his friends in consequence and causing them to feel glad that his pains are at an end, though they grievously mourn that he has been taken away from them?

Dr. Davis' parents were natives of Wales. Father and mother having left their native country to reside in Ohio, accidentally met and became acquainted on shipboard. Arriving in Cincinnati, they were married, and removed to a farm in Butler County. While Dr. Davis was still a boy they returned to Cincinnati, where he attended the common schools until ready for Woodward, when he entered that institution. Having passed through its curriculum and graduating, he began the study of medicine.

Dr. Davis' medical preceptor was the distinguished physician and medical writer, Dr. Eberle, author of Eberle's Practice, Eberle's Materia Medica and Therapeutics, etc., the most eminent physician of this country of his time. Graduating from the Medical College of Ohio, he served a year as interne of the Commercial Hospital, now the Cincinnati Hospital. After leaving the Hospital he opened an office, we are informed, on Vine Street, and in an unusually short period of time acquired a large practice. Precise and exact in everything he did, and possessing a demeanor that imparted the strongest confidence, his patients *believed* in him. They believed in him not because they regarded him as a brilliant doctor; not because they thought he knew more than other medical men; but because they considered him competent; because they looked upon him as a conscientious man, a man who would conscientiously do all in his power for their relief. While engaged in building up a large and remunerative business he was appointed Demon-

strator of Anatomy in the Medical College of Ohio. How long he filled that position we do not know, but have been informed that his teaching was very acceptable to all the students of the college. When the Miami Medical College was first organized he was made Professor of Anatomy. While thus serving, we made his acquaintance, which has been maintained ever since. We regarded him as having abilities as an instructor of a high order. His pleasant manner and perfect gentlemanly conduct at all times and on all occasions made him beloved by every student who listened to his instructions. We remember when he would review previous lectures by examinations—"quizzes," as the boys called them—that when a student would fail to answer questions correctly, instead of charging him with inattention to his demonstrations, as he deserved, he would take the blame upon himself by saying that he must have failed to make that point plain in his lecture. When the Miami Collegere organized a second time, the Faculty having abandoned the first one, he was offered the chair of Surgical Anatomy, but declined it.

Dr. Davis was engaged in public practice for many years. As we have stated, he was for a year interne in the old Commercial Hospital. Afterwards, for thirty years, he served on the staff of it and the present Cincinnati Hospital (the Commercial taking the name of the Cincinnati Hospital on the erection of the present building). During the late war he served as a Contract Surgeon in Cincinnati, having charge of the Marine Hospital, which was then used as a military hospital.

Dr. Davis served for a long time as one of the Trustees of the McMicken University, rendering the institution important service. When ex-President Hayes was Governor of Ohio he was appointed by him a member of the State Board of Charities, and held the position up to the time of his decease. He was very efficient, as every man would suppose who knew his character, in bringing about greatly needed reforms in the prisons and charitable institutions. Some time ago an investigation disclosed the fact that the penal institutions of the State were in a miserable condition, but now they will compare favorably with the best of other States. It is needless to state that Dr. Davis had much to do in effecting the change.

For many years Cincinnati has been cursed with large numbers of saloons, who have kept their doors open on

Sundays as well as week days. Also, there are not a few theaters which have constantly defied the laws of the State by having plays on Sundays. A few years ago an organization was made, embracing many of the best citizens of the city, called the "Law and Order League." Dr. Davis was made President of this organization, and held the position to the day of his decease. Though the greatest discouragements had to be met, yet at all times has he labored most assiduously to deliver the city in which he has spent his life from the domination of the lawless. Though the press, in catering to the venal and licentious classes, assailed him and his colleagues, in their efforts to enforce respect for law and order, with sneers and contemptuous epithets, yet has he never swerved for a moment in the discharge of what he believed to be his duty.

For several years Dr. Davis has been President of the Union Central Life Insurance Company of Cincinnati. His management has been such that the organization is in a most prosperous condition, having a large constituency among men of wealth and influence.

But our want of space forbids us to write more. We will only, therefore, reiterate what we have before said, that in Dr. Davis' transition from life the medical profession of Cincinnati has lost one of its noblest and best members —a professional brother who loved the profession which he practiced for nearly a half century, who did all he could for its advancement and elevation and never disfigured it by a blot. He was always a member of a medical society and took an active part in the discussions. But the community has as much reason to mourn his departure as the medical profession. He loved the city in which he resided, and had its welfare at heart. He labored that it should be a law-abiding city, and that his fellow-citizens, like himself, should walk in the paths of rectitude while journeying to a city not made with hands. We have often counseled with him, and had reason to believe we had his goodwill. It affords us pleasure to record the fact that he was a subscriber to the MEDICAL NEWS since the issue of the first number.

LIFE INSURANCE AND THE MEDICAL PROFESSION.—An article with this heading appears in the *Lancet*, of London, of date of December 13th. It says that it is really painful to see how many widows and orphans of medical men are

left either totally unprovided for or only very slenderly so. Often after the death of a physician, leaving a widow and a number of helpless children, appeals have to be made in their behalf, and these it is stated are not always so successful as could be wished, since members of the medical profession, as of other professions, must be just before they can be generous. Life insurance, the writer asserts, is a *positive duty* for those whose death would mean a total want of the means of living to widow and orphans. "You certainly have no moral right to beget paupers for others to support."

Young doctors who have begun practice without having first gotten married are in the habit of refusing to take out a policy in a life insurance company for the reason, as they state, that it is only married men, men with families, who have need to insure their lives. As regards such a view the writer in the *Lancet* says: "It is a great mistake to consider life insurance as only intended for those who are married or are about to be. Single men should insure while, their expenses being moderate, they can afford the premium better, and have a policy with bonuses all ready for settlement before the wedding-day, while to all members of the profession a policy of insurance in a sound office is a good investment for money."

In the weekly issue of the *Lancet*, of November 29, is a letter by a Mr. T. S. Clouston, of Edinburgh, on life insurance. We gather from the letter that Mr. C. has been giving attention for a long time to the subject of life insurance and has studied it well. Towards the close of his letter he says: "Look on insurance as being just as much a necessary condition of modern social life to every man who has no fortune as honesty and honor in life." Assuredly such an expression as this is placing life insurance on a very high plane. No man, as is conceded by every one, can maintain a position in social life without honesty and honor; for so soon as it is demonstrated that an individual is destitute of integrity he is ostracized—becomes an outcast from society, and as such he can have no real happiness. But there is no enjoyment in poverty. A poor man may respect himself in the consciousness of his uprightness, but no one else will respect him. A physician's widow who has been left poor by him on his decease, if compelled to take in washing to win bread for herself and her little ones, can hold no position in society and will have no respect shown her.

Mr. Clouston advises physicians to insure on the endowment plan, "so that you may have, at sixty or so, as much money coming in from your policies as will by its interest pay your first insurances, and thereby set you free from any further payments out of your ordinary income. To have to pay premiums after sixty is usually very burdensome. Most medical men's incomes are then shrinking." He also recommends physicians who have sons growing up, if they can afford it, to effect an insurance on each when they are about eighteen or twenty. If this is done in an office where the premiums diminish after the first five years, "what could be a more suitable present to a son on getting married or settled than such a policy, on which he would only have a small yearly sum to pay? What step more calculated to teach him thrift and providence all his life?" At that age, too, he suggests he will not have contracted diseases that would prevent his acceptance by insurance companies at a later age.

The writer of the article from which we first quoted warns physicians against insuring in newly-formed offices. Without desiring to do such any injustice, he says it may be laid down as a canon that it takes at least thirty years for an office to be well secured against all contingencies. If he may judge, he states, from what he has heard and read, medical insurers have been most unfortunate in their choice of a company, and have asked with much feeling, "Is any company safe?" This distrust he pronounces absurd. For while most, if not all, of those companies which have proved failures have been of more or less recent growth, he says the companies established in the last and previous centuries still survive in a flourishing condition, and most of those established in the first half of this century are thoroughly sound and reliable companies. If safety be the only requirement, no one, he thinks, need be afraid. If a company can show a successful, thriving business, from year to year, for thirty, thirty-five, or more years there will be no need to require further evidence of its soundness and permanency.

But we can not spare more space in our present issue on the subject of life insurance. We propose to continue it in our next number, and will probably bring a number of companies to the attention of our readers which can be regarded as thoroughly safe companies in which to insure —companies which can be depended upon to fulfill every condition of their policies.

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